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Searching for Sustainable Microfinance

A Review of Five Indonesian Initiatives

Lessons about the implementation of microfinance operations from five initiatives in rural Indonesia.

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Summary findings

Expanding the microfinance market can promote economic growth and reduce poverty in many countries. But expanding this market is advantageous only if the increased activity is sustainable. Ravicz draws lessons from five Indonesian microfinance initiatives in rural areas and proposes ways for governments and donors to support the microfinance sector.

Those programs demonstrate that microfinance initiatives can provide a valuable service to low-income people at a temporary, affordable cost to governments or donors. Incentives for customers and staff are key features of successful microfinance operations that enable them to operate with low subsidies or on a self-sustaining basis. Programs should also charge adequate real interest rates, aggressively pursue repayment, and achieve a significant volume of business.

To accelerate progress toward self-sustainability, programs can track the subsidies they receive, and their supporters can impose hard budget constraints and declining subvention support.

Government-owned microfinance initiatives are vulnerable to political pressures that undermine their commitment to sound banking practices. Granting these institutions autonomous status, imposing hard budget constraints, and privatizing them when they are financially sustainable, can reduce their susceptibility to political influences. Alternatively, governments and donors could support the sector through temporary subsidies to private sector initiatives to help them defray start-up costs.

Supervision can be improved if a country's microfinance industry, assisted by its central bank, establishes industrywide standards. Microfinance institutions could contract for supervision services from commercial banks. The central bank could monitor supervisors to ensure that they exercise due diligence.

This study finds that institutions can efficiently reach clients in remote areas through subdistrict-based units and field staff. They need not rely on group lending techniques, savings requirements, or intermediary organizations between banks and borrowers to boost efficiency.

Initiatives can serve female borrowers without targeted marketing if loan products meet women's needs and are accessible to them.

Governments could increase the usefulness of microfinance to agriculture by encouraging state-owned microfinance institutions to develop and pilot-test loan products that meet smallholders' needs.

This paper — a product of the Development Research Department — is part of a larger effort in the group to analyze the characteristics, performance, and poverty alleviation implications of microcredit institutions. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Marisol Ravicz, room MC7-789, telephone 202-458-5582, fax 202-522-3264, Internet address mravicz@worldbank.org. February 1998. (91 pages)

Searching for Sustainable Microfinance: A Review of Five Indonesian Initiatives

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ABBREVIATIONS

ADB	Asian Development Bank
BAPPENAS	Badan Perencanaan Pembangunan Nasional (National Development Planning Agency)
BI	Bank of Indonesia
BKD	Badan Kredit Desa (Village Credit Institution)
BKK	Badan Kredit Kecamatan (Sub-district Credit Bank)
BKKBN	National Family Planning Coordination Board
BNI	Bank Negara Indonesia (Indonesian National Bank)
BPD	Bank Pembangunan Daerah (Provincial Development Bank)
BPR	Bank Perkreditan Rakyat (People's Credit Bank or Rural Bank)
BRI	Bank Rakyat Indonesia (People's Bank of Indonesia)
GTZ	Gesellschaft fur Technische Zusammenarbeit (German Agency for Technical Cooperation)
IDT	Inpres Desa Tertinggal (Presidential Instruction on Villages That Have Been Left Behind or President's Poverty Reduction Program)
IFAD	International Fund for Agricultural Development
KPM	Kelompok Pengusaha Mikro (Small Entrepreneurs' Group)
KSM	Kelompok Swadaya Masyarakat (People's Self Help Group)
KSP	Kelompok Simpan Pinjam (Savings and Credit Group)
KUD	Koperasi Unit Desa (Village Unit Cooperative)
KUK	Kredit Usaha Kecil (Small Enterprise Credit)
KUPEDES	Kredit Umum Pedesaan (General Rural Credit)
KURK	Kredit Usaha Rakyat Kecil (People's Small Enterprise Credit)
KUKESRA	Kredit Usaha untuk Kesejahteraan Rakyat (Small Scale Credit for People's Wealth)
LDKP	Lembaga Dana dan Keuangan Pedesaan (Institution for Small Enterprise Financing)
LKP	Lumbung Kredit Pedesaan (Rural Credit Storehouse)
LPN	Lumbung Pitih Nagari (Storage for Pitih Nagari)
LPUK	Lembaga Pembiayaan Usaha Kecil (Institution for Small Enterprise Financing)
NGO	Non-government Organization
P4K	Pembinaan Peningkatan Pendapatan Petani-nelayan Kecil (Assistance in Income Generation for Marginal Farmers and Fisherman)
PHBK	Program Hubungan Bank dan KSM (Project Linking Banks and Self Help Groups)
SDI	Subsidy Dependency Index
TAKESRA	Tabungan Kesejahteraan Rakyat (Savings for People's Wealth)
TPSP	Tempat Pelayanan Simpan-Pinjam (Place for Savings and Loan Services)
UNDP	United Nations Development Program

EXECUTIVE SUMMARY

Rural residents in many countries could benefit from the expansion of formal and semi-formal microfinance if financial institutions can serve clients with more useful and less-expensive financial products than those available from moneylenders. However, significant expansion of the microfinance sector is only feasible if it can be accomplished without subsidy, or at an initial cost that the government can support and in a way that will enable it to become self-sustainable. This report (i) examines five Indonesian microfinance programs that currently serve low-income clients in low-density areas; (ii) reviews the legal and regulatory issues that affect the Indonesian microfinance market; (iii) discusses lessons learned; and (iv) recommends ways governments and donors could promote the sector's health and sustained growth internationally.

Program Descriptions

The Indonesian central government or a local government owns the five programs examined in this report. Four were established between 1979 to 1989. Four are involved exclusively in financial services or support to these services, while one also provides other services to clients. The programs vary considerably in size and geographic scope (Table 1).

Badan Kredit Kecamatan (BKK) financial institutions are owned by the South Kalimantan provincial government and located in sub-district capitals. The province has 110 units for its 109 sub-districts. Field staff travel to surrounding villages to transact business. The 34 BKK units created before 1992 make loans and accept deposits. The 76 units created after 1992 only make loans.

Table 1:
Scope of Programs in 1996

	Year Founded	Number of Provinces	Number of Units
BKK (South Kalimantan)	1985	1	110
LKP (Dompu District)	1989	1	4
PHBK	1989	10[a]	323
P4K	1979	6[b]	NA
BKD (excludes inactive units)	1898	3	4,806

a/ PHBK is expanding to three more provinces.
b/ P4K is expanding to 12 more provinces.

Lumbung Kredit Pedesaan (LKP) is a system of semi-formal financial institutions owned by the provincial government of Nusa Tenggara Barat (NTB). LKP is very similar in structure and function to BKK. This review examines only the four LKP units in Dompu District.

Program Hubungan Bank dan KSM (PHBK) is a microfinance program sponsored by the Central Bank of Indonesia (BI) and the German government's Agency for Technical Cooperation (GTZ). The program operates in 10 provinces and is expanding to 3 more. In March 1996, 323 banks or bank branches were participating in this program, and the number was growing rapidly. The program provides technical assistance to private and state-owned banks, non-government organizations (NGOs), and borrower groups to help them develop group lending skills. Client groups can obtain loans and open savings accounts.

Pembinaan Peningkatan Pendapatan Petani-nelayan Kecil (P4K) is a group-based microenterprise lending and promotion program targeting the rural poor. P4K operates in 6 provinces and has expanded on a pilot basis to 12 more. Ministry of Agriculture extension workers act as agents for the government-owned Bank Rakyat Indonesia (BRI) to extend lending and savings services to the rural poor. The program also provides training in microenterprise skills, and attempts to link borrower groups with community activities and social service agencies.

Badan Kredit Desa (BKD) is a system of village-based financial institutions. The units are owned by individual villages and operated by village governments. BKD units are located in the rural areas of Java. There are 5,345 units, of which 4,806 were active in 1996. Units make loans and accept deposits.

Loan Characteristics

Loan products vary by institution but generally carry high interest rates and have short repayment periods. PHBK and P4K make group loans. LKP and BKD make individual loans. BKK primarily makes individual loans, although some of its units have begun to make group loans. Programs' nominal effective annualized interest rates range from about 24 percent for P4K, to over 400 percent for those PHBK loans that pass through several intermediaries. Most of the programs' loans have effective annual real (inflation adjusted) interest rates of 50 percent or more. This is much higher than the BRI Unit Desa real interest rate of about 21 percent for prompt payers. The programs' maximum loan terms vary from 3 to 18 months. Most loans require weekly or monthly repayments. None of the programs requires collateral for small loans.

Outreach and Sustainability

The programs' average loan sizes range from 7 to 13 percent of Indonesia's GDP per capita (US$67 to US$130). This ratio for 9 of the world's most respected microcredit programs is 16 to 136 percent. Women account for 40 to 62 percent of the programs' borrowers, versus 20 to 90 percent for the internationally respected programs. The programs accept voluntary savings deposits, and have a savings requirement to obtain at least some loans.[1] Four of the five programs have experienced rapid growth in the number of loans they have issued in recent years (Table 2).

Four of the five programs had annual default rates of 3 percent or less in 1994 and 1995. This level of default is satisfactory by international microcredit standards. BKK can now operate on a sustainable basis without subsidies. LKP and PHBK have experienced rapidly declining subsidies in recent years. P4K's subsidies increased from 1993 to 1995, but even in 1995 its subsidy was significantly lower than in the early 1990s (Table 2).

[1] Savings accounts generally earn interest at a rate approximately equal to the inflation rate.

Table 2:
Program Outreach and Sustainability

		BKK		LKP		PHBK		P4K		BKD	
		1993	1995	1993	1995	1993	1995	1993	1995	1993	1995
Outreach											
	Average loan size percent of GDP/capita	9	10	9	7	10-13	7-13	7	7	8	7
	Annual number of loans issued (thousands)[a]	18	35	3	4	10	27	113	164	1,713	1,607
	Annual loan volume (US$ millions)	1.4	3.4	0.2	0.3	1.6	5.5	6.2	10.9	110.6	113.4
	Loan volume real growth rate (percent)	NA	42	-20	28	7	73	162	-14	8	-8
	Women percent of borrowers	NA	40	NA	62	NA	50	NA	50	NA	40
Sustainability											
	Average real interest rate (percent)	49	50	137	137	89	89	16	16	111	111
	Real interest rate required to eliminate subsidies (percent)	118	50	288	172	550	244	68	81	NA	NA
	Annual default rate (percent)	23	3	12	6	5	1	NA	2-3	4.4	2.6
	Loan volume in arrears percent of volume outstanding or Number of groups with arrears percent of groups with outstanding loans	27	6	17	20	20	11	6	19	18	18
	Voluntary savings percent of loans	16	31	35	18	NA	NA	NA	NA	5	5

Information was not available for items labeled "NA" in the above table.
a/ For PHBK and P4K figures are estimates based on number of loans issued to groups and estimated average number of members in each group. For BKD, the figure is an estimate based on the number of loans issued in December of each year.

Lessons Learned and Recommendations

The programs show that microfinance initiatives can:

- provide low-income people with a valuable service at an initial, affordable cost to governments or donors;
- obtain strong financial performance through the use of incentives for staff and clients;
- reduce, and even eliminate, the need for subsidies by charging high real interest rates, aggressively pursuing repayments, and achieving a significant volume of business;
- face political pressures that undermine their commitment to sound banking practices;
- be weakened by poorly-designed supervision systems;

- reach clients in remote areas through sub-district based units and field staff;

- serve female borrowers without targeting them in marketing efforts if loan products meet women's needs and are accessible to them.

Poverty Reduction and Economic Development . Although this review does not measure microfinance programs' impact on poverty reduction and economic development, a general examination of the programs indicates that expansion of microfinance is an efficient tool to promote these goals. These programs make very small loans, charge interest rates higher than those of commercial banks, and enforce debt repayment. The majority of the programs' clients are too poor to secure the larger and less expensive loans available from commercial banks. The fact that the programs face overwhelming demand for credit despite their rates and strict enforcement of repayment, indicates that low-income clients obtain high returns from the investment of these funds.

These programs require very large subsidies when they are first introduced. However, after they have expanded in scale and demonstrated a firm commitment to repayment performance, subsidies can decline dramatically.

If unsubsidized private provision of microfinance is expanding, government and donor support for this sector is not as critical as it is if the microfinance market is less developed. However, even if the private sector is dynamic, governments and donors can promote microfinance in remote areas where required initial start-up costs are high, and private firms are hesitant to enter the market in the short- to medium-term.

Incentives for Customers and Staff. Carefully-designed incentives for customers and staff are key features of successful and sustainable microfinance programs. Most of the programs reviewed here encourage staff to maintain high collection rates and maximize profits by linking staff compensation to the volume of repayments collected and/or profitability. Most also promote demand by making it relatively easy for customers to obtain loans. All facilitate physical access to services through the use of conveniently located facilities and/or field staff and credit agents. Most have relatively simple application procedures and provide customers with loans within a few days or weeks of the initial inquiry. None of the programs require physical collateral for small loans. They promote prompt repayments by linking borrowers' access to future loans and their future loan sizes to punctual repayment of current commitments. P4K's recent problems with arrears demonstrates what can happen when programs do not rely on incentives to promote repayment. P4K did not have incentives for credit agents to pursue repayment collection, and began to experience arrears problems. The situation was compounded when it canceled operations in districts that were experiencing mounting arrears. As a result, many groups that were repaying promptly defaulted when it became obvious that they would not receive additional loans.

Subsidies. If governments and donors limit microfinance subsidies, they can promote the long term health of the market. Many government and donor-supported microfinance programs make very low-interest loans, and frequently do not enforce repayment. These programs are usually

unsustainable and create a negative demonstration effect. Governments and donors can minimize these problems by ensuring that all of their microfinance initiatives follow market-based principles.

However, the programs reviewed here demonstrate that subsidies can play a valuable **temporary** role in the supply of microfinance. If these programs were not subsidized in their early years, they would have been forced to charge interest rates that clients could not pay. Subsidies have given these programs time to develop the approaches, scale, and staff and client experience necessary to move towards self-sustenance while charging high but affordable interest rates.

The programs have reduced their subsidy dependence over time. They, and others like them, could likely move more rapidly towards self-sustainability if they were aware of the full magnitude of their subventions, and were under pressure to reduce them. Microfinance initiatives should (i) institute accounting and reporting formats that accurately track all (including in-kind) subsidies, and (ii) appropriately provision for bad debt and depreciate fixed assets. Their backers could encourage the institutions' self-sustenance by establishing annual subsidy reduction goals.

Governments and donors also can eliminate programs' long-term subsidy dependence by structuring their support of the sector in the form of temporary set-up subsidies (that do not include interest rate subsidies) for private providers that would subsequently have to generate profits to remain in the market. PHBK operates in this way.

Government Control. Government-owned financial institutions can be vulnerable to political considerations and public perceptions that depress system productivity. BKK and LKP faced pressures to relax their underwriting and collections efforts during the 1992 elections, and this risk is ever-present for state-owned financial intermediaries. Many BKD units' lending decisions are based partially on borrowers' standing in their villages rather than on their creditworthiness. Several of the programs have accounting and reporting procedures that are significantly influenced by political considerations. Managers with BKK and LKP said that when the programs began, borrowers assumed that government programs would not strictly enforce repayment requirements.

Governments can weaken the microfinance sector by granting market power to government bodies that do not adhere to best practice standards. In Indonesia, Presidential Regulation No. 71/1992 requires that all microfinance institutions too small to become rural banks either discontinue deposit-taking services, or become cooperatives. Also, the government discontinued plans to expand the BKD system because the Department of Cooperatives feared that the units would compete with the microfinance activities of the *Koperasi Unit Desa* (KUD) village cooperative system. Yet the cooperative movement has not always adhered to prudent banking standards in its microfinance activities.

If a government chooses to operate a microfinance program, it should ensure that political considerations do not undermine the program's commitment to sound banking practices. Granting a government-owned microfinance institution autonomous status can help reduce the political pressure it faces. Governments can force institutions to operate with hard budget constraints and declining subventions. When the institutions are commercially viable, governments

can privatize them. For example, BKK could now be privatized. If a government develops a microfinance program that operates in collaboration with private banks, it can train the banks to provide microfinance services without continuing government assistance. Widely publicizing government programs' successes in moving towards, or achieving, self-sustainability also helps reduce the political pressure to which they are subject.

Supervision. In an effort to improve microfinance supervision, the Indonesian government requires semi-formal financial institutions that accept deposits to become rural banks or cooperatives. However this requirement is difficult for many small institutions to comply with, and may not improve their supervision. Further, it has limited the volume of their lending growth, and may have induced some to expand their branch networks in sub-optimal ways.

The long-term health of the microfinance market is predicated on good supervision. To improve supervision, microfinance institutions, with central bank assistance, could develop microfinance standards regarding underwriting; collections; lending limits; loan classification; provisioning for, and writing-off, bad debts; the acceptance of required and voluntary savings; accounting; reporting; etc. These standards could be applicable to semi-formal microfinance institutions; banks and cooperatives that function as microfinance institutions; and commercial banks' microfinance activities.

Ideally industries should have primary responsibility for supervising themselves. One way to accomplish this is for microfinance institutions to contract for supervision services with a commercial bank that the central bank judges to have the ability to perform adequate oversight. To ensure that supervisors correctly fulfill their duties, central banks could penalize supervising institutions that do not exercise due diligence. Supervising institutions could bolster employee performance through incentive-based staff remuneration.

Serving Clients in Remote Areas. Of the modalities reviewed here, the BKK/LKP system of a network of small, sub-district based units with field staff is probably the best means of reaching households in low-density areas. This system functions well because (i) customers have relatively easy access to banking services, (ii) lenders control their agents thereby ensuring that they work in the banks' best interests, and (iii) services can be delivered in a relatively cost-effective way. BKK and LKP demonstrate that relatively low-subsidy programs can serve individuals not only groups. Also, programs need not rely on intermediaries to reach borrowers.

The modalities that PHBK employees in more remote areas (i.e. systems in which NGOs and/or borrower groups function as financial intermediaries) are expensive to implement and can experience poor repayment performance. The P4K system, which is divided between BRI and the Ministry of Agriculture, is very cumbersome and inflexible. Also, the program's reliance on agricultural extension workers as credit agents reduces the lender's ability to enforce loan repayment and pursue repeat business because it does not directly control this staff. Further, borrowers have difficulty accessing the lender directly, and extension workers may be distracted

from their core jobs.[2] BKD offers maximum convenience for borrowers in remote areas and has minimal overhead costs. However, units lack dynamism, with village-level managers frequently lending to only a small number of regular customers.

Serving Women and Farmers The fact that women account for a relatively large share of borrowers in the programs reviewed is primarily a "demand-pull" rather than a "supply-push" phenomenon. Most of these programs do not deliberately seek to attract female borrowers. Rather the programs' loans are better suited to petty trading than to agriculture. In Indonesia, women are heavily represented among petty traders. Further, the programs transact business in villages and do not require collateral for small loans. These features facilitate women's access to services.

The performance of these programs demonstrate that if microfinance institutions offer products that woman find useful and can access, they will seek these services without targeted marketing efforts.

Few of the programs reviewed offer loans that are of significant use to farmers. Loans are usually of short duration and payments are generally required on a weekly or monthly basis. Managers of several of the microfinance programs are reluctant to make loans for agricultural use.

If microfinance programs wish to service farmers, they should tailor loan products to smallholder needs. This might include offering seasonal loans that do not require frequent repayments. It is likely that these loans would not have to carry lower interest rates than current products to be affordable for at least some agricultural uses.[3] For programs that do not already offer these products, staff might benefit from training in how to evaluate the credit risk of agricultural loans and encouragement to consider applications for agricultural use. To reduce the risk of entering this market, programs could introduce these loans initially on a pilot basis. They could then evaluate demand and repayment performance to determine the loan products and staff approaches that obtain the best results.

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[2] Indeed, many agriculture extension experts recommend that extension workers' responsibilities be limited to information dissemination.

[3] Often farmers obtain seeds and fertilizer, and pay for these inputs with the crops they subsequently grow. In Indonesia, the implicit interest rates on these in-kind transactions can be as high as those microfinance institutions charge.

1. INTRODUCTION

Households derive important benefits from financial services. In most developing countries, rural residents rely primarily on moneylenders for credit, and may not have access to safe, convenient savings services. Rural residents could benefit from the expansion of formal and/or semi-formal microfinance institutions if they can reach clients with financial products that are more useful and less-expensive that those available from moneylenders. However, significant expansion of the microfinance sector is only feasible if it can be accomplished by the private sector, or at a cost that the government can support. This report (i) examines five Indonesian microfinance programs that currently serve low-income clients in low-density areas and require reasonable and/or declining subsidies; (ii) reviews the legal and regulatory issues that affect the microfinance market in Indonesia; and (iii) discusses how additional microfinance programs that provide very large subsidies compete unfairly with private sector and more market-based government programs. The report concludes with the lessons that can be learned from the microfinance institutions discussed, and recommends ways governments and donors could best support the sector in the future.

Evolution in the Theory of Microfinance

Policy makers have long acknowledged the importance of rural households' access to credit. Credit allows households to start or expand business activities, and/or increase profit margins through the purchase of inputs at wholesale prices. This can augment individual households' incomes and promote rural development.

The private sector has generally been reluctant to enter this market. Low population densities, poor infrastructure, and the small value of individual savings and loan transactions raise the costs of providing services to this population. Also, remote, low-income populations are frequently perceived as being poor credit risks because they often lack access to collateral, their incomes may be dependent on highly weather-sensitive agricultural production, and their ethnicity and culture is frequently different from that of the urban-based financial community. In addition, until recently, conventional wisdom held that low-income households could only afford to pay very low interest rates.

The importance of financial services for low-income households together with the private sector's reluctance to enter this market and the perceived inability of low-income populations to pay market interest rates led governments to launch highly subsidized rural credit programs. These programs suffered from a number of shortcomings. First, because the programs offered very low-interest loans, the volume of funds they could supply was limited, and it was impossible for the lending institutions to achieve self-sustainability. Second, lending volume and sustainability were further eroded because these institutions lacked an incentive to undertake careful underwriting and enforce timely repayment. Third, state-run programs, particularly those that lack a profit-incentive, are very vulnerable to political influences. Borrowers are frequently selected for political reasons rather than because they fit the profile of the ostensibly targeted beneficiaries or are sound credit risks. Finally, wealthy households appropriated the benefits of many of these programs because they preferred to borrow from them rather than from the unsubsidized formal sector (Khandker et al., 1995; and Von Pischke et al., 1983).

However, the successful experience of a number of low-subsidy or no-subsidy microcredit programs demonstrated that these programs could achieve self-sustainability, were affordable for borrowers, and were much less likely to be appropriated by the wealthier strata of society (Christen et al., 1995, and Yaron, 1992b).

In recent years, microfinance experts also have begun to recognize the importance of rural financial institutions providing savings services. Access to savings can help households achieve consumption smoothing goals and permits them to accumulate resources for investment purposes. Savings allows households to reduce risks, thereby contributing to their ability to make higher risk/ return investments (Christen et al., 1995). Savings mobilization helps institutions to grow by increasing the funds they have available for lending purposes. Institutions can use information on clients' savings habits to help assess their creditworthiness.

Microfinance In Indonesia

Indonesia has a rich and largely successful history of microfinance. The country's first microfinance program (the *Badan Kredit Desa*) was established in 1898. Today, the country is home to a large number of highly diverse microfinance institutions and programs. These range from Bank Rakyat Indonesia's (BRI's) giant Unit Desa network - which in 1996 had 3,595 branches and outstanding loans of almost US$1.74 billion - to very small, village-owned microfinance initiatives. The abundance and diversity of these programs, many of which have very strong outreach and are financially viable, make Indonesia an excellent location to review microfinance activities.

Programs Selected for Inclusion in This Study

This study provides a detailed examination of four microfinance programs and a partial analysis of a fifth. All of the programs serve low-income clients in remote areas. The programs reviewed are outlined below.

Badan Kredit Kecamatan (BKK). BKK financial units are owned by the provincial government of South Kalimantan, and are located in sub-districts. The province has 110 units for its 109 sub-districts. Mobile field staff travel from the units to surrounding villages to transact business. BKK units created before 1992 make loans and accept deposits; those created after 1992 only make loans. Most units make only individual loans, but some have begun to loan to groups. The BKK system of South Kalimantan is modeled on the BKK system of Central Java. However, the two systems operate independently. This report examines the South Kalimantan system.

Lumbung Kredit Pedesaan (LKP). LKP is a system of semi-formal financial institutions owned by Nusa Tenggara Barat province (NTB). The LKP system is similar to BKK. Small financial services units located in sub-district capitals serve most of the villages in that sub-district via field staff. LKPs are located throughout NTB. This report reviews the four LKP units operating in Dompu District.

Program Hubungan Bank dan KSM (PHBK). PHBK is a group-lending program sponsored by the Central Bank of Indonesia (BI) and the German government's international development

agency (GTZ). It operates in Bali, Java, North Sumatra, Lombok, South Sulawesi, and NTB. Operations will begin shortly in Irian Jaya, North Sulawesi, and South Kalimantan. The program provides technical assistance to private and state-owned banks, non-government organizations (NGOs), and borrower groups to help them develop group lending skills. This report reviews the entire program's performance.

Pembinaan Peningkatan Pendapatan Petani-nelayan Kecil (P4K). P4K is a group-based microenterprise promotion and lending program targeting the rural poor. It is sponsored by the Ministry of Agriculture and several international donors. Ministry of Agriculture extension workers act as credit agents for BRI to help the bank reach groups of the rural poor. The program also provides training in microenterprise skills, and links borrower groups with community activities and social service agencies. P4K operates in Java, Bali, and NTB; and has expanded on a pilot basis to 12 more provinces. This report reviews the entire program's performance.

Badan Kredit Desa (BKD). BKD is a system of village-owned financial institutions located in rural Java. Each BKD unit is owned by a village and operated by three village residents. The head of the BKD is usually the village head. BKD staff are paid on commission and generally transact business one day per week. They operate from a village public building or the home of one of the village leaders. There are 5,345 BKDs, of which 4,806 were active in 1996. This report reviews the entire system's performance.

Method

Research for this report was carried out in May and June 1996 in Indonesia. The author met with program managers for five microfinance initiatives, and reviewed financial and outreach information for them. The author observed field activities for three of the five programs.

Report Structure

This report contains four chapters and seven annexes. Chapter 2 reviews major legal and regulatory issues impacting the sector. Chapter 3 summarizes findings for the five programs studied. Chapter 4 examines lessons from the analysis and explores how governments and donors might continue to support the sector. Annexes 1 through 5 contain detailed analyses for the five programs examined. Annex 6 summarizes recommendations for how the programs could meet best practice standards in loan classification, bad debt provisioning, and loan write-off policies. Annex 7 explains the meaning and calculation of the Subsidy Dependency Index - a tool used to measure the direct and indirect subsidies that financial institutions receive.

2. LEGAL AND REGULATORY ISSUES

Introduction

The legal and regulatory framework for Indonesia's financial system has been detailed in several reports (Hanna, 1994; Hanson and Kenward, 1996; and World Bank, 1992). This section briefly reviews some of the legal and regulatory issues that impact microfinance.

Government Regulation No.71/1992 Supporting the 1992 Banking Law

Semi-formal financial institutions undertake a large share of Indonesia's microenterprise lending. According to Government Regulation 71/1992, small financial that accept deposits must convert to rural banks or cooperatives. Institutions created after the 1992 Law was promulgated must meet a minimum capital requirement of Rp. 50 million (US$21,400) to become rural banks. This capital requirement is beyond the capacity of virtually all semi-formal financial institutions. Conversion to cooperatives may be detrimental to these institutions as it places them under the aegis of the government-sponsored system of cooperatives, which has a poor record in management of financial institutions.

In practice, this Regulation has inhibited the expansion of microfinance in Indonesia and forced systems to develop in sub-optimal ways. For example, new BKK microfinance units in South Kalimantan are attempting to comply with the Regulation by not accepting deposits. This deprives their customers of a valuable service and limits their growth and self-sustainability. New village-based financial institutions known as *Tempat Pelayanan Simpan Pinjam* (TPSP) are currently being introduced throughout the country. To conform with the Regulation, these are being established under the auspices of the government-sponsored system of cooperatives. However, there are early indications that the cooperative system's influence may undermine the financial viability of TPSPs.

The Regulation also sets out a complicated system of geographic limits on rural bank activities. In theory, rural banks can only conduct business in sub-districts adjacent to the sub-district containing their head office or in other sub-districts within their head office's district. In sparsely-populated rural areas, these restrictions limit rural banks' ability to reach remote clientele who generally have no other means of obtaining formal sector credit. In practice, Bank of Indonesia is aware of this problem, and this provision of the Regulation is only sporadically enforced. However, its existence serves as a deterrent to rural banks' serving remote clients.

Allocation of Government Enterprise and Private Sector Profits to Support Poverty Reduction

Ministry of Finance Regulations issued in 1994 and 1995, as well as a Presidential Regulation issued in 1995,[1] require all state-owned corporations to use 5 percent of their profits to support poverty reduction initiatives. Private firms and individuals with incomes greater than Rp. 100

[1] Ministry of Finance Regulation no. 316/kmk.016/1994, Presidential Regulation no. 90 year 1995, and Ministry of Finance Regulation of 1995 in support of Presidential Regulation no. 90.

million (US$42,800) also are required to give 2 percent of their profits/income to the Family Planning Board's large and highly subsidized, group-based grant/lending program called *Tabungan Kesejahteraan Rakyat/Kredit Usaha untuk Kesejahteraan Rakyat* (TAKESRA/KUKESRA). The program raised Rp. 500 billion (US$214 million) in its first year of operation. It provides loans with a 6 percent interest rate, and returns 10 percent of payments to the borrower after the loan is repaid.

State-owned corporations' contributions are frequently used for programs managed by state-owned banks that offer grants or highly subsidized loans to microentrepreneurs or cooperatives. The managers of microfinance programs that provide loans at or near market rates believe these programs pose unfair competition because they lend at highly subsidized rates. Further, they feel that the programs undermine borrowers' repayment discipline because repayment expectations are generally low.

Kredit Usaha Kecil (KUK) Small Loan Requirement

The KUK requirement states that all commercial banks must lend 20 percent of their total portfolio to small borrowers. In practice however, "small borrowers" are defined as enterprises with net worth of less than Rp. 200 million (US$85,600) or annual sales of less than Rp. 1 billion (US$428,9000). Loans to these customers can be up to Rp. 350 million (US$150,000). Because of these very broad definitions, the KUK requirement in practice probably has little impact on microenterprise finance markets.

3. COMPARISON OF MICROFINANCE PROGRAMS

This chapter summarizes the structure and performances of five Indonesian microfinance programs. Annexes 1 through 5 review each program in greater detail.

Program Descriptions

The programs vary considerably in size and geographic scope (Table 3). BKK and LKP operate primarily or exclusively in a single Indonesian province. PHBK and P4K function primarily in Java and Bali, but are expanding to cover a significant portion of Indonesia. BKD operates in Java. It was established at the turn of the century, and has existed in its current form since 1952. P4K, PHBK, BKK, and LKP were all created between 1979 and 1989. All programs receive some form of direct or indirect subsidies from government and/or donors, although subsidy levels vary significantly by program. Of the five programs, only P4K provides services not explicitly related to the financial sector.

Table 3
Scope of Programs in 1996

	Year Founded	Number of Provinces	Number of Units
BKK [a]	1985	1	110
LKP (Dompu District)	1989	1	4
PHBK	1989	10 Expanding to 3 more	323
P4K	1979	6 Expanding to 12 more	NA
BKD	1898 [b]	3[c]	4,806[d]

a/ There are independent BKK programs operating in Central Java and South Kalimantan. This report reviews performance for the BKK program in South Kalimantan.
b/ BKD have existed in their present form since 1952.
c/ BKD units are in East, Central, and West Java and Jogyakarta. BKD-type units known as TPSPs operate in 23 provinces outside Java.
d/ There are 5,345 BKD units of which 4,806 are active. In addition, almost 1,000 BKD-type units known as TPSP have been established since 1994.

Badan Kredit Kecamatan (BKK) began in 1985 when the provincial government of South Kalimantan began to create semi-formal financial services units endowed with modest facilities and low-interest loans/capital endowment grants of approximately US$5,000 each. After the promulgation of the 1992 Banking Law, the provincial government stopped creating BKKs and began to establish *Lembaga Pembiayaan Usaha Kecils* (LPUKs). The only difference between BKKs and LPUKs is that the former accept deposits and the latter do not. There are 34 BKKs and 76 LPUKs - one unit in each of the province's 109 sub-districts (*kecamatans*) and one additional unit.

Units are owned by the province. Each unit is located in a sub-district capital and serves most of the villages in that sub-district via customer visits to the facility and relatively frequent visits to the villages by field staff. The units do not receive fixed or regular subsidies from the government but do benefit from in-kind and indirect subsidies. The provincial development bank (BPD)

supervises the units. The South Kalimantan BKK system is modeled on the BKK system of Central Java but functions entirely independently of it. This report reviews only the South Kalimantan system.

Lumbung Kredit Pedesaan (LKP). LKP is a system of semi-formal financial institutions owned by the province of Nusa Tenggara Barat (NTB). This report reviews only the four LKP units operating in Dompu District of NTB. These units were established between 1989 and 1991. The LKP system is similar to BKK in structure and function. Small financial services units are located at the sub-district capital and serve most of the villages in that sub-district via approximately-weekly visits to the villages by field staff. The units make loans and accept deposits. The units do not receive regular subsidies, but benefit from a variety of in-kind and indirect subsidies. In addition, several have received additional capital endowment grants. NTB's provincial development bank supervises the program.

Program Hubungan Bank dan KSM (PHBK). PHBK is a group lending program sponsored by Bank of Indonesia (BI) and the German government's development agency (GTZ). It began in 1989, and currently operates in Bali, Java, North Sumatra, Lombok, South Sulawesi, and NTB. Operations will shortly begin in Irian Jaya, North Sulawesi, and South Kalimantan. The program provides technical assistance to private and state-owned banks, NGOs, and borrower groups to help them develop group lending skills. The program does not charge a fee for this assistance.

Participating banks include private rural banks called *Bank Perkreditan Rakyat* (BPRs), provincial development banks (BPDs), public and private commercial banks, and provincial and village-owned financial facilities. Program managers have found that BPRs are the most eager to participate. In March, 1996, 323 banks or bank branches were participating in the program, and the number was growing rapidly.

The program operates along three basic models. In the first model, borrower groups function as financial intermediaries. Banks provide them with a group loan which they on-lend to their members. NGOs train groups and provide general support to them. Model 2 functions similarly to Model 1 with the exception that the NGO itself functions as a financial intermediary between the bank and the credit groups. In Model 3, the bank lends to a channeling group. Each member of the group receives a portion of each loan which he or she is responsible for repaying. The group assumes joint liability in the event that one member defaults. NGOs are not involved in this third model. Bank of Indonesia (BI) supervises banks and NGOs participating in the program.

Pembinaan Peningkatan Pendapatan Petani-nelayan Kecil (P4K). P4K is a group-based microenterprise promotion and lending program targeting the rural poor. It began in 1979, and is funded by the Indonesian government and several donors. The program is implemented by the Ministry of Agriculture and *Bank Rakyat Indonesia* (BRI). The program focuses primarily on credit provision, savings promotion, and building microenterprise skills. Staff also link borrower groups with community activities and social service agencies. The program operates in Java, Bali, and NTB. It has expanded on a pilot basis to 12 additional provinces. Neither BRI nor participating client groups pay the program for the services they receive.

Ministry of Agriculture extension agents act as financial services agents. They identify poor households, help them form groups, and generally serve as intermediaries between groups and the participating bank (BRI). Extension agents receive incentive bonuses for identifying and training groups, but not for facilitating groups' repayment of their loans. P4K is jointly supervised by the Ministry of Agriculture, P4K headquarters managers, and BRI.

Badan Kredit Desa (BKD). BKD is a system of village-owned financial institutions located in the rural areas of Java. It was founded in 1898. There are 5,345 BKDs, of which 4,806 were active at the end of 1996. BKDs were established with small capital grants from provincial governments. Each BKD unit is owned by an individual village and operated by three residents of the village. BKD staff are paid entirely on commission. BKDs generally transact business one day per week. They operate from a village public building or the home of one of the village leaders. The units make loans and accept deposits. BKDs are supervised by BRI.

Loan Products

Loan products vary by institution but generally carry high interest rates and have short repayment periods. PHBK and P4K make group loans only. LKP and BKD make only individual loans. BKK primarily makes individual loans, although it has recently begun to make group loans.

Interest rates vary significantly across programs and within programs across loan and borrower types. Interest rates range from a low of about 24 percent for P4K to a high of over 200 percent for those PHBK loans that pass through several intermediary organizations. These rates are generally very high in comparison to the 32 percent effective rate that BRI Unit Desa charges on its loans if borrowers repay promptly. For the programs reviewed here, interest rates are higher when several intermediaries separate the bank from the end user. Several programs also charge higher interest rates on small loans and loans with frequent repayment requirements, as these loans have a particularly high administrative-cost-to-loan-size ratio. Finally interest rates also vary depending on the extent to which borrowers are required to absorb full program costs. For example, BRI is able to charge a relatively low interest rate for P4K loans because the P4K program pays for credit agents and does not pass this expense on to BRI. BKK borrowers pay a higher interest rate because they must pay the full cost of credit underwriting and loan servicing.

The programs' maximum loan terms range from 3 to 18 months. The overwhelming majority of loans for these programs are for 12 months or less. Most programs prefer to offer loans with short loan terms believing that the credit risk on these loans is less than the risk on longer term credits. The programs' loan sizes range from a minimum of US$11 to a maximum of about US$440 (Table 4). In contrast, BRI Unit Desa loans averaged US$896 in 1995 (Charitonenko Church et al., 1997). None of the programs reviewed here requires collateral for small loans.

Table 4
Summary of Loan Product Terms

	Clients	Loan Term	Forced Savings Percent of Loan	Interest Rate [a] (Percent)	Loan Size (US$)
BKK	Primarily Individuals	2.5 - 18 months	Up to 10	51 - 196	22 - 440
LKP (Dompu District)	Individuals Only	12 weeks	10	128	22 - 220
PHBK	Groups Only	3 - 12 months	20	46 - 450	NA
P4K	Groups Only	12 - 18 months	Up to 25	24 - 154[b]	44 - 132
BKD	Individuals Only	1-9 months[c]	10	131 - 347	11 - 428[c]

a/ Estimated effective annual declining balance interest rates calculated by taking into account the interest rates and fees that these programs charge, their forced savings requirements, and the interest they pay on forced savings.
b/ Higher rate is rate charged by groups to their own members. Loans from BRI carry a rate of 24 to 33 percent for the first four loans, and 62 percent for the fifth credit and all credits thereafter.
c/ Eighty percent of loans have a term of three months or less and have a maximum size of US$257.

BKK. Loan terms for BKK loans vary by unit but none offers a loan for shorter than 10 weeks or longer than 18 months. Officially, the interest rates on loans vary based on loan size and repayment frequency. In practice, the rate that an individual borrower pays depends on the options allowed to him or her by the branch manager. Some BKK units have forced savings requirements of up to 10 percent of the loan amount. On a declining balance basis and including forced savings requirements if applicable, interest rates range from 3.5 to 9.5 percent on a monthly basis or 51 to 196 percent annually. Loans range in size from US$22 to US$440. Some units are experimenting with group loans.

LKP. The LKP has one loan product - a 12 week loan repayable weekly in 12 equal installments. The first installment represents the interest due on the loan; the next, a forced savings payment; and the final 10, repayment of capital. The forced savings earns interest and can be reclaimed after the loan is repaid. The effective declining balance interest rate for this product, taking into account a fee and required savings, is 8.3 percent on a monthly basis or 160 percent annually. Loans range in size from US$22 to US$220.

PHBK. In PHBK, banks, NGOs, and credit groups all are free to choose the terms under which they will make loans. Loan products vary from one BPR that made loans for 10 weeks with daily repayments, to other banks making 12 month loans with monthly repayments. The PHBK

program encourages financial intermediaries to require a 20 percent forced savings deposit in lieu of collateral. Loans to end users under the PHBK program generally carry rates that - on a declining balance basis, and including fees and forced savings requirements - ranged from 3.2 percent to 15.3 percent monthly or 46 to 450 percent per year.[2] Lenders are free to determine their own loan size ranges. In practice, loans to end users probably do not exceed US$400 to US$500. The program's average loan size is probably about US$110.

P4K. For P4K, loan terms are usually from 12 to 18 months. Repayment frequency can be monthly, quarterly, semi-annually, or annually, depending on the use of the loan. In theory the program attempts to match repayment frequency with the expected cash flow pattern for the investment. In practice, loans generally have monthly repayment requirements. Groups must save up to 20 percent of the loan amount before obtaining a credit. Assuming monthly installments and taking into account the forced savings requirement and a small incentive for timely repayment, effective interest rates on a declining balance basis are about 1.6 to 2.3 percent per month or 22 to 31 percent annually. After the fourth loan, the terms change, and the effective interest rate increases to 4.1 percent per month or 62 percent annually on a declining balance basis. When the program expands to new provinces, all credits will carry the higher interest rate. In addition, many P4K groups collect voluntary savings from members and lend these funds out to other members. Typically, groups lend out these funds at a rate equivalent to 8.1 percent per month or about 150 percent per year on a declining balance basis. Loans to individual end users range in size from US$44 to US$132.

BKD. Most BKD units have only one loan product - a 10 week loan with an interest rate and payment terms similar to that of the LKPs. In practice, however, borrowers' ability to withdraw their required savings varies by BKD office. Many BKDs allow withdrawals only for religious holidays or do not allow withdrawals at all, such that the forced savings becomes a fee. The annualized interest rate for this product is 7.2 percent per month or 131 percent per year on a declining balance basis assuming that the forced savings is returned without interest after the loan is repaid. The interest rate is 13.3 percent per month or 347 percent annually if the forced savings payment is never returned. Loans range in size from US$22 to US$263.

Savings Products

With the exception of some BKK units, the programs offer voluntary savings products and have savings requirements for most borrowers. The programs' interest rates paid on voluntary and required savings deposits are generally approximately equal to inflation or slightly positive in real terms. They are also roughly in line with the 9 percent rate that BRI pays on Unit Desa deposits of Rp. 25,000 to Rp. 200,000 (US$11 to US$86).[3]

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[2] Loans with the lowest interest rates for end users are those made by commercial banks directly to channeling groups. Loans with the highest interest rates for the ultimate beneficiary are those that pass from rural banks to NGOs, to credit groups, to end users.

[3] BRI Unit Desa pays a 0 percent interest rate on deposits of less than Rp. 25,000 (US$11), 9 percent on deposits of Rp. 25,000 to Rp. 200,000 (US$11 to US$86), and 12 percent on deposits over Rp. 200,000 (over US$86).

BKK. Only the 34 original BKK units accept voluntary savings or require forced savings. Voluntary and compulsory savings earn an annual interest rate of 9 percent. All of the BKK units limit their volume of lending because they lack funds. Program organizers feel, however, that the supply of savings is price inelastic, and that increasing the interest rate paid on deposits would not significantly increase the volume of funds mobilized.

Table 5
Summary of Savings Product Terms

	Interest Rate on Voluntary Savings (Percent)	Interest Rate on Required Savings (Percent)
BKK[a]	9	9
LKP (Dompu District)	10	10
PHBK	12 - 22[b]	12 - 16
P4K	9	9
BKD	9	0

a/ For units established before 1992. Units established after 1992 do not accept savings.
b/ Figures are for BPRs in Sumbawa. Higher rate is for time deposits.

LKP. LKP units have one voluntary savings instrument: a demand deposit with no restrictions on withdrawal. This instrument, and the bank's forced savings accounts, earn interest at a 10 percent annual rate.

PHBK. All banks participating in PHBK offer groups the opportunity to hold voluntary saving accounts. The interest rate paid on these accounts varies by bank. In Sumbawa, private rural banks (BPRs) were paying an interest rate of 12 to 16 percent per year on demand deposits. These rates are positive in real terms, although generally below the level paid by BPRs in more competitive markets. The interest rate paid on time deposits ranged from 16 to 22 percent per year for a 1 year deposit. Forced savings earn interest at the same rate as voluntary demand deposits.

P4K. P4K groups are encouraged to voluntarily save funds with BRI. In addition, individuals may deposit funds with their credit group to be on-lent to other group members. BRI pays groups an interest rate on savings equal to the amount it pays on its popular SIMPEDES savings accounts. This is 9 percent for small deposits. Groups themselves determine what interest rate they will pay to members for funds that are on-lent to other group members. This rate varies by group but is considerably more than the rate paid by BRI.

BKDs. BKDs have accepted voluntary savings deposits since 1992. These accounts earn interest of 9 percent per year. BKDs pay no interest on forced savings.

Supervision

The five programs are supervised in diverse ways, and supervisors exercise varying degrees of control over programs' policy decisions.

BKK and LKP units are supervised by the district branches of their provinces' development banks (BPDs). In addition to supervising performance, the BPDs make all major policy decisions for the BKK and LKP units, including the types of savings and lending products units can offer, the terms they can charge on these instruments, how they should provision for bad debt, when they should

write off loans, what their underwriting and loan servicing procedures should be, whom they should hire, how they should train staff, etc. BKK has one full-time supervisor for every 8.5 units, the four LKPs in Dompu District has 1 full-time supervisor.

Banks' and NGOs' PHBK activities are supervised by Bank of Indonesia staff and consultants. Groups that function as financial intermediaries are supervised by NGOs; and groups that simply channel credits to members are supervised by banks. Supervisors do not make policy decisions for the banks, NGOs, or borrower groups participating in PHBK, although they do make policy recommendations in some areas. Supervisors also train participating banks, NGOs, and groups.

Implementation of P4K is split between group development, which is controlled by the Ministry of Agriculture, and lending, which is controlled by BRI. P4K managers receive data from BRI but appear to have virtually no influence over BRI's P4K policies and procedures. Within BRI, the program is overseen by the Small Business, Food, and Cooperative Division. P4K managers exert greater influence over the Ministry of Agriculture's program activities.

BRI managers at regional and head offices define the business of BKDs, and make major policy decisions. BKDs are supervised by BRI staff or contract workers. BKDs generally receive at least monthly supervision visits. Supervisors review the units' bookkeeping, cash handling, and portfolio quality. They arrange for excess BKD funds to be deposited with BRI branches, organize BRI loans to BKDs, and facilitate BKD units' lending to each other. Supervisors can dismiss unit staff.

This analysis found that even BKK, LKP, and BKD, which are supervised by provincial development banks or a commercial bank, do not always follow best practice standards for microfinance institutions. Even though the BPD branch in Dompu District had one full-time supervisor for its four LKP units, one unit manager was able to effectively bankrupt his unit by making fraudulent loans and embezzling funds. Several of the programs sometimes allow political considerations to influence underwriting and loan servicing decisions. Few adequately provision for bad debt. Reporting formats and accounting procedures are geared more to informing politicians and donors than to obtaining timely information concerning recent performance trends. For example, few programs appropriately age arrears, track annual default rates, account for subsidies, or systematically write off loans. This lack of timely and accurate data makes it difficult for managers to assess profitability and gauge the impact of new products and procedures. Further, managers are handicapped in their efforts to recognize and diagnose problems early, and to track the results of remedial actions. Annex 6 discusses these issues in greater detail and reviews best practice standards concerning how the programs should handle these procedures.

Program Performance

This section reviews programs' sustainability and outreach. Sustainability is measured by arrears and default rates, and the size of the subsidy required to sustain operations. Outreach is measured by the volume of annual lending and savings activities (scope) and the population it serves (depth of market penetration).

Sustainability. It is difficult to compare arrears and default rates for the programs studied because few provide complete information on the aging of bad debts. Furthermore, programs write off bad debts sporadically or not at all so annual arrears figures include bad debts incurred over a lengthy previous period. Also, the programs report arrears information in different formats that are often not comparable. Finally, arrears data for some programs contained obvious errors. Given these shortcomings, arrears information is useful primarily as an indication of likely trends. This section provides information on the percent of outstanding loan volume in arrears for BKK, LKP, and BKD, and the percent of groups with outstanding loans that are experiencing arrears for PHBK and P4K.[4]

BKK experienced a serious arrears problem in 1993. However, the volume of loans in arrears in 1994 and 1995 were the lowest for the five programs reviewed - 6 percent. The LKP program had about 20 percent of its portfolio volume in arrears in 1995. It experienced an increasing arrears problem from 1992 to 1995. PHBK experienced early problems with arrears. However, groups with arrears declined from a high of 29 percent of groups with outstanding loans in fiscal 1992/93 to about 13 percent in fiscal 1995/96. P4K experienced very low arrears through 1993, but the program's arrears have grown in recent years. By 1995, groups with arrears accounted for 19 percent of groups with outstanding loans. Preliminary data for 1996 indicate that in that year arrears were likely higher. The volume of BKD loans in arrears was 23 percent in 1992, and declined to 16 - 18 percent over the next three years (Table 6).

Table 6
Percent of Outstanding Loan Volume in Arrears or Percent of Groups with Outstanding Loans in Arrears[a]

	1991	1992	1993	1994	1995
BKK	NA	NA	27	6	6
LKP (Dompu District)	NA	15	17	NA	20
PHBK	21	29	20	11	13
P4K	5	5	6	11	19
BKD	NA	23	18	16	18

a/ For BKK, LKP, and BKD, these figures represent the percent of loan volume in arrears net of previous years' defaults. For PHBK and P4K these figures represent the percent of groups with outstanding loans that are experiencing arrears.

The Committee of Donor Agencies for Small Enterprise Development set as an acceptable standard for microenterprise lending that 10 percent or less of total loans should have late payments of 30 days or more. The programs do not separate out loans in arrears by 30 days or more. However, the above data, which measure the volume or number of loans in arrears by one day or more, indicates that BKK arrears are below this international standard, and

[4] For BKK, LKP, and BKD, the volume of loans in arrears for each year is estimated by netting out of the programs' stated figures the cumulative defaults that the programs experienced in previous years. In this way, the author simulates a situation in which the programs wrote off defaults each year. It was not possible to make this adjustment for PHBK and P4K. Thus, to the extent that these programs do not write off defaults adequately, arrears are somewhat overstated.

PHBK arrears are probably approximately equal to it. The other three programs have arrears rates that are likely somewhat above this standard.

Table 7
Default Rates (Percent)

	1991	1992	1993	1994	1995
BKK	NA	NA	23	3	3
LKP (Dompu District)	0	1	12	4	6
PHBK	Estimated by Program Management to be a cumulative rate of 2-3 percent since program inception				
P4K	Estimated by Program Management to be a cumulative rate of 2-3 percent since program inception				
BKD	NA	6	4	2	3

PHBK and P4K do not reliably track annual defaults. For BKK, LKP, and BKD the programs' information on defaults occasionally contradicts other data or is inconsistent across years. Thus the default rates in Table 7 should be viewed as indicative figures. BKK experienced defaults of about 23 percent of outstanding loan volume in 1993. However, defaults accounted for only 3 percent of loan volume in 1994 and 1995. For LKP, defaults were 12 percent of outstanding loan volume in 1993, and about 6 percent in 1995. Program managers for PHBK and P4K, placed their cumulative default rates at 2 to 3 percent. BKD's default rate was 6 percent in 1992 and 2 to 4 percent from 1993 to 1995. The Committee of Donor Agencies for Small Enterprise Development states that microfinance lenders should have annual losses from defaults of 4 percent or less of outstanding loan volume. Over the last two years, all of the programs except LKP have achieved this standard. BRI Unit Desa had a bad loan write-off rate of 4 percent in 1993 (Christen et al., 1995).

This report defines "subsidy" as including all direct and indirect gifts and loans of assets, personnel, and services; exemptions from taxes; and the implicit benefit of paying liability and equity holders a below-market rate of return.[5] Under this definition, all of these programs currently receive some form of subsidy. However, the extent of these subsidies varies.

Table 8
Interest Rates Required to Eliminate Program Subsidies

	Required Interest Rates to Eliminate Subsidy (Percent)					Current Rates (Percent)[a]
	1991	1992	1993	1994	1995	
BKK	NA	NA	139	64	64	64
LKP (Dompu District)	NA	187	325	225	198	128
PHBK (total subsidy)	659	723	613	427	277	107
PHBK (cash subsidy)	263	282	257	212	159	107
P4K (total subsidy)	461	168	84	91	98	27
P4K (cash and subsidized loan to BRI)	322	109	61	77	86	27
BKD	NA	NA	NA	NA	NA	131-347[b]

a/ Estimated average annualized interest rate including fees, forced savings requirements, and interest paid on forced savings.
b/ If BKD units return the borrower's forced savings when the loan is repaid, the effective interest rate is approximately 131 percent on an annualized basis. Some units do not return forced savings, or do so with a considerable delay. If the forced savings is never returned, the effective interest rate is 347 percent.

Table 8 provides estimates of the interest rates that programs would have been required to charge over time to eliminate all subsidies, appropriately provision for bad debts, and pay a market rate of return to liability and equity holders.[6]

BKK would have had to charge an interest rate of 64 percent in 1995. This rate is equal to the average rate it currently charges. This indicates that while the program receives subsidies, the profit it earns is sufficient such that it does not require subventions to operate on a sustainable basis. The LKP program would have had to charge a rate of 198 percent in 1995, down from 325 percent in 1993. The 1995 figure is however somewhat higher than the rate required in 1992. PHBK would have had to charge a 227 percent interest rate in fiscal 1995/96 to fully cover all costs attributed to the program. To cover all costs excluding the in-kind costs of salary and overheads BI attributed to the program, the program would have had to charge 159 percent. While PHBK's full-cost figure is the highest of the programs reviewed, its required interest rates have declined every year since 1992. Indeed, PHBK's required rates in fiscal 1995/96 are only about 65 percent as high as the rates required in the previous year. P4K's interest rate required to

[5] All five programs fund part of their portfolios from savings accounts required from borrowers. These required savings accounts earn an interest rate below that which the program would have to pay to obtain marginal additional resources from another source. For the purposes of this analysis, this practice is considered to be equivalent to generating additional fee income from loans and is not counted as a subsidy. An alternative approach would have been to assume that this forced savings policy constitutes a subsidy equal to the difference between the interest paid on the required savings and the interest the institution would have had to pay on marginal additional liabilities. Footnote 39 on page 47 reviews LKP's total subsidy if forced savings were counted as a subsidy in this way.

[6] This analysis is based on a Subsidy Dependency Index (SDI) for each program. See Annex 7 for a description of how the SDI is calculated.

eliminate subsidies declined sharply from 1991 to 1993. It rose somewhat from 1993 to 1995, but still stood at 98 percent in 1995. P4K's 1995 required rate, excluding in-kind contributions by the Ministry of Agriculture, was 86 percent. PHBK and P4K are continuing to extend their geographic coverage and consequently are incurring start-up costs that inflate their required unsubsidized interest rates. Thus even if the programs do not become more efficient, the interest rates required for them to operate without subsidies will probably decline. Information on BKD subsidies was not available.

These required interest rates are very high by international commercial bank standards, especially considering that Indonesia's inflation rate has been 10 percent or less over the last 5 years. Further, these required interest rates are much higher than the 32 percent interest rate that BRI Unit Desa currently charges or the 18 percent rate BRI Unit Desa would have had to charge in 1995 to maintain financial self-sufficiency (Charitonenko Church et al., 1997). However, Unit Desas typically serve a more affluent clientele with considerably larger loans. Further, they send field workers to clients' villages only when evaluating a credit application or if a borrower is experiencing arrears. The rates required for BKK, P4K, and LKP to become self-sustaining are similar to the rates charged by many private rural banks (BPRs) for loans to a similar or more affluent clientele. BPRs also typically do not serve clients in their own villages. Box 1 explores why these programs' required rates are high.

Box 1

Explaining High Required Interest Rates for Microfinance Programs in Indonesia

The four microfinance programs for which data were available would have been required to charge interest rates of 64 to 277 percent in 1995 to operate entirely without subsidies. Required interest rates are high because programs:

1. Operate in Low-Density Areas. Programs operating in low-density areas have higher unit costs than those in high-density areas because the coping strategies for reaching inhabitants of remote areas are costly. Overhead and transportation costs are amortized over fewer transactions, and per-loan costs are higher. Banks can address this problem by serving a larger percentage of the population. This strategy may however require banks to reduce underwriting standards that, in turn, might result in increased credit risk. Banks would then be required to increase interest rates. Alternatively, if programs expand their geographic coverage to attain in low density areas the same lending volume that they achieve in higher density areas, they will incur higher transportation costs. Indirect means of reaching remote inhabitants can also be costly. In Dompu District, the use of NGOs as financial intermediaries increased the cost of credit to end users by up to 54 percentage points per year.

2. Operate in Areas with Poor Transportation Infrastructure. If transportation is problematic, programs must spend more money to reach borrowers because transportation costs are higher and/or more field workers will be require to reach the same number of customers. If banks require clients to come to their offices, then the cost of transportation per client may actually be higher than if bank staff visit villages. However, this increased cost will not be reflected in interest rates.

3. Make Very Small Loans. The average loan size to GDP-per-capita ratio for the programs studied is 7 to 13 percent. This compares to 89 percent for the BRI Unit Desa program, and 48 percent for Grameen Bank. Banks incur fixed per-loan administrative costs. Thus, they must charge higher interest rates on small loans than on larger ones.

4. Are Incurring Start-Up Costs. Programs incur start-up costs when they expand to new areas, and when they make first-time loans. PHBK and P4K are expanding geographically and adding new clients. Both programs have already experienced significant declines in required interest rates as they have achieved greater economies of scale, and it is likely that this trend will continue.

5. Could Improve Efficiency. To some extent, most programs could be streamlined. For example, LKP units are over-staffed, and P4K has a cumbersome loan approval process.

Outreach Scope. BKD is by far the largest program in terms of annual volume of loans issued (Table 9). BKD probably issued loans in excess of US$100 million in 1995.[7] Its real volume of loans grew modestly in 1993 and 1994 and declined by 8 percent in 1995. P4K is the second largest program, with loans totaling almost US$11 million annually. P4K grew extremely rapidly from 1991 through 1994, but declined in 1995. PHBK's loan volume was approximately US$5.5 million in fiscal 1995/96. The program experienced significant difficulties from fiscal 1991/92 to fiscal 1993/94. However, PHBK loan volume grew in real terms by 84 percent in 1994/95 and 73 percent in 1995/96. BKK had an annual volume of about US$3.4 million in 1995. Much of the program's rapid growth in the last two years is attributable to growth in the number of BKK units. However, the annual real loan volume of existing units also grew strongly. Lending growth for the LKP units in Dompu district has been erratic, but was strong in 1995. These four units made loans of US$312,000 in 1995. All of these programs are very small in comparison to BRI Unit Desa which had a lending volume of US$1.9 billion in 1995. This system's real lending volume grew by almost 19 percent in 1995.

Table 9
Loan Volume and Growth

	Real Growth in Annual Lending Volume (Percent)					Annual Loan Volume (US$)
	1991	1992	1993	1994	1995	1995
BKK (all units)	NA	NA	NA	56	42	3,421,250
BKK (existing units)	NA	NA	NA	20	19	2,212,039
LKP (Dompu District)	57	1	-20	2	28	312,963
PHBK	64	-24	7	84	73	5,526,422
P4K	96	126	162	87	-14	10,895,930
BKD[a]	NA	NA	8	2	-8	113,400,000

a/ BKD figures are annual estimates based on lending volume in December of each year.

[7] For BKD, lending volume is crudely approximated by multiplying the program's volume of lending in December of each year by 12.

All five programs studied accept voluntary savings. The volume of BKK's voluntary savings was equal to about 25 percent of the program's asset volume in 1995.[8] Voluntary savings increased steadily over the three years since the program began to accept these deposits. The volume of voluntary savings were equal to 15 percent of asset volume for the LKP program in 1995, down from 22 percent in 1993. Voluntary savings are equal to about 3 percent of BKD's assets. Information on the volume of voluntary savings was not available for PHBK and P4K (Table 10).

Table 10
Outstanding Voluntary Savings Volume as a Percent of Adjusted Assets[a]

	1992	1993	1994	1995
BKK (for units that accept deposits)	0	12	21	25
LKP (Dompu District)	14	22	16	15
PHBK	NA	NA	NA	NA
P4K	NA	NA	NA	NA
BKD	2	3	3	2

a/ Programs' outstanding assets are corrected to simulate their writing off bad debt. Required savings are also subtracted from assets because they function as a reduction in loan size.

Outreach Depth. Of the five programs reviewed, only P4K explicitly targets low-income households. The program claims that all beneficiary households have incomes below the poverty line. Limited data from PHBK indicate that about 20 percent of its client households have incomes below the poverty line. Income data on the other programs' clients were not available. One proxy for income commonly used to assess depth of microfinance outreach is loan-size- to-GDP-per-capita. For the five programs, average loan-size-to-GDP-per-capita in 1995 ranged from up to 13 percent for the PHBK program to 7 percent for LKP, P4K, and BKD. These figures are lower than those of nine of the most respected microfinance programs

Table 11
Depth of Program Outreach

	Average Loan Size (US$)	Loan Size Percent of GDP Per Capita	Women Percent of Borrowers[a]
BKK	99	10	40
LKP (Dompu District)	75	7	62
PHBK	71-130	7-13[b]	50
P4K	67	7	50
BKD	71	7	50
Range for 9 programs worldwide	NA	16- 136	20 - 90

a/ Women's share of loans was estimated by program managers or was based on a sample of program loans.
b/ Program managers' estimate of the average loan size per group member results in loans per person equal to 13 percent of GDP per capita. Estimates of the number of members in each borrower group results in loans per person equal to 7 percent of per capital GDP.

[8] The BKK program did not report voluntary savings separately from required savings. The value of required savings is estimated by multiplying the average required savings rate by the outstanding balance of BKK loans. The program's estimated voluntary savings is total savings minus this estimated required savings.

worldwide (Christen et al., 1995). [9] BRI's Unit Desa system had an average loan size of 89 percent of per capita GDP in 1995 (Charitonenko Church et al., 1997). These programs' average loan sizes range from US$67 to US$130 (Table 11). When loan sizes are converted to US dollars using purchasing power parity, all of these programs have average loans that are smaller in size than those of the nine microfinance programs.[10]

For the five programs studied, women account for 40 to 62 percent of borrowers (Table 11) versus 24 percent of Unit Desa borrowers (Christen et al., 1995). Women account for a relatively large share of borrowers primarily because the programs' loans are well-suited to petty trading. In Indonesia, women are heavily represented among petty traders.

Reasons for Evolution in Program Performance. The BKK system suffered a considerable shock in 1993. In part this was due to economic concerns that shook Indonesia's entire financial system. The problem appears worse on paper than it actually was because records of arrears rates were corrected in that year. Finally, political interference catalyzed by elections negatively impacted units' lending decisions. Since that time however, units have performed well. In 1994 and 1995, BKK could have operated profitably without subsidies, had very acceptable arrears rates, and impressive outreach depth. Program managers claim that for each new facility, arrears begin high and then decline over time. Borrowers initially assume that this is a subsidized government program, and it takes time to educate them to the fact that the loans must be repaid. However, program managers claim to have improved this education process and have trained the staff of new units accordingly.

LKP in Dompu requires a higher interest rate than either BKK or P4K to compensate for subsidies. Political influences and weaknesses in program management create the need for this relatively large subsidy. Indeed, one unit was driven to the brink of insolvency through corrupt management practices.

The PHBK program had a troubled start, but has improved significantly since 1993. Program organizers attribute initial, high program costs and arrears rates to inadequate screening of participating NGOs and groups, and to reliance on the program's Model 2, which provides financing to credit users through banks making loans to NGOs which lend to credit groups which lend to members. Alternative program models are simpler and more direct. Program volume has increased in recent years partially due to the program's aggressive marketing to rural banks (BPRs). BPRs are much closer to PHBK's target market than many of the larger government and private commercial banks. Also, they have little, if any, bureaucracy and therefore possess the flexibility to adopt the PHBK group lending approach quickly. PHBK is still expanding its

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[9] Programs are: BRI Unit Desa (Indonesia), Grameen Bank (Bangladesh), BancoSol (Bolivia), Bankin Raya Karkara (Niger), Agence de Credit pour L'Entreprise Privée (Senegal), La Associacion Dominicana para el Desarrollo de la Mujer (Dominican Republic), Fundacion Integral Campesina (Costa Rica), K-Rep (Kenya), and CorpoSol (Colombia).

[10] The information required to convert loans values in US dollars into loan values in US dollars adjusted for purchasing power parity was obtained from World Bank, 1996.

geographic coverage. Once geographic growth is completed, it is likely that the program's required subsidy level will decline further.

In contrast to PHBK, P4K initially experienced rapid lending volume growth, low arrears, and declining subsidy rates. However, program performance has deteriorated since 1993. Program managers attribute P4K's recent increases in arrears and declining volume to several factors. They believe that a reassignment of the program within the Ministry of Agriculture contributed to defaults because many borrower groups were accustomed to making repayments to specific agriculture extension workers. When these did not visit the groups for an extended period, many did not make other arrangements to deliver payments to a BRI outlet. A further hypothesis is that arrears were exacerbated by BRI's policy of canceling the program in districts in which arrears rates were higher than 10 percent. Under this policy, many groups with strong repayment records stopped paying when it became apparent that the program was to be discontinued in their area. A reorganization of the program within the Ministry of Agriculture required additional training costs in locations in which the program already operated. Finally, program cost-to-output ratios have increased as the program has incurred start-up costs by expanding to a number of additional provinces.

The basic structure of the program may have contributed to its recent problems. The program uses agriculture extension workers as credit agents who rarely have a banking background and are not under the control of the bank disbursing the loans. Furthermore, until 1996 they had no direct incentive to investigate the creditworthiness of borrowing groups or to encourage these groups to repay their loans in a timely manner.[11] Also, extension agents provide a number of free services. Groups may be less likely to see the funds they receive as a real obligation to be repaid because their primary contact in the process generally does not charge for services. Finally BRI operates this program from its branches rather than through its Unit Desa system, yet Unit Desas are much closer to the credit end-users geographically and in terms of the types of credits they issue. Relocating the program to Unit Desas would facilitate collection efforts, and might also increase the proportion of groups receiving more than one credit. It would be much easier for groups to apply for additional credits from Unit Desas than from BRI branches.

Most BKD units lack dynamism; and over time, many have decapitalized. While there were initially 5,345 units, only about 3,000 active units remained before a recapitalization initiative in 1992. Because units are managed on a part-time basis by people with other business activities, most units lend relatively modest funds to the same customers over time and often make little effort to expand the volume of their business or broaden their customer base. This lack of dynamism is reflected in the system's low loan-to-assets ratio. Loans accounted for 49 percent of assets from 1993 though 1995. Because the units have few fixed assets and no investments, about 36 percent of system resources are deposited with BRI. This compares to the South Kalimantan BKK system in which loans account for 84 percent of assets.

[11] In 1996, program management had plans to improve credit agents' incentives.

Response to Regulation No.71/1992 Supporting the 1992 Banking Law

The programs differ markedly in the degree to which they have been affected by the Regulation supporting Indonesia's 1992 Banking Law. PHBK and P4K operate through commercial and rural banks. Thus, their operations are not affected by the Regulation. LKP program managers believe that they will be able to avoid the Regulation through "cosmetic" changes to their units. However, the Regulation have strongly influenced the growth of BKKs and BKDs.

The provincial government of South Kalimantan has established 72 new BKK units since the Regulation was promulgated. To comply with the Regulation, these new units do not accept deposits. This lack of a deposit-taking mandate hurts the new units. Unit managers cited a lack of sufficient funds to meet effective demand as their most critical, or second most critical, problem. For BKKs that are permitted to mobilize savings, deposits are an important source of funds. For these units, voluntary deposits were equal to at least 25 percent of net assets in 1995.[12] Not only will an inability to mobilize savings retard lending growth, but it will also deny customers a valuable service. Finally, it will deprive managers of a useful means of gauging the creditworthiness of potential loan clients.

Most BKD units are too small to qualify to become BPRs according to the 1992 Banking Regulation. However, the regulation makes an exception for institutions already in existence prior to 1992 and possessing a license from the Ministry of Finance. BKDs fall into this classification. BI is currently determining how it will deal with BKD units that are too small to become BPRs. It appears likely that these units will be allowed to continue to operate but will no longer be able to take deposits from people outside the village in which they are located. The Regulation prevents the creation of new BKDs.

In an attempt to expand informal credit while still complying with the Regulation, the Indonesian government has created 975 modified BKD-type institutions since 1994. These new institutions, called *Tempat Pelayanan Simpan Pinjam* (TPSP), are almost identical to existing BKDs in their structure and function. However, they come under the umbrella of the *Koperasi Unit Desa* (KUD) village cooperative system. These institutions do not violate the new regulations because, according to the Regulation, financial institutions under the government-sponsored cooperative system are exempt from the minimum capital requirements that other small financial institutions must meet if they accept deposits. For its involvement with the TPSP units, the KUD system receives a lump sum and monthly fees. The system has a very inauspicious history of managing financial institutions, and appears to be pressuring the TPSP units to make loans at subsidized rates. It is unlikely that the cost of KUD involvement with these facilities will be justified in terms of improved unit performance.

[12] The BKK program did not report voluntary savings separately from required savings. The maximum value of required savings is estimated by multiplying the average required savings rate by the outstanding balance of BKK loans. The program's volume of estimated minimum voluntary savings is total savings minus estimated maximum required savings. Thus in practice, actual voluntary savings are significantly above the level reported here.

Competition

On the credit side, program managers report that their units face limited competition. The BRI Unit Desa system has facilities throughout Indonesia. However, managers from the five programs reviewed claim that they did not face significant competition from BRI for lending. They feel that their customers are generally too poor or lacked required collateral to qualify for Unit Desa loans. Of the five programs reviewed, only BKK reports that it faces some competition from BRI for more affluent customers. BKK managers claim that they compete with BRI by providing loans faster, requiring less paperwork, and reducing transactions costs to clients through field staff visits to clients' businesses.

BKK, PHBK, and P4K report that they face some competition from programs that provide grants or very low interest loans to low-income families. The Family Planning Board (BKKBN) has recently launched a highly subsidized, group-based lending program for poor families (TAKESRA/KUKESRA). Private firms and individuals with profits or incomes in excess of Rp. 100 million (US$42,800) are required to channel 2 percent of profits/income to this program. The pressure to repay credits issued through this program is not high. Further, the program's effective interest rate is negative in **nominal** terms.[13] The program was launched in 1996 and in less than one year accumulated Rp. 500 billion (US$214 million) in funding. Some state-owned enterprises use the 5 percent of profits they are required to devote to poverty reduction to support other highly-subsidized lending activities. BKK, PHBK, and P4K managers feel that these programs compete on unfair terms for some of their clients and erode good repayment habits.

Cooperative leaders functioning as private moneylenders also operate in the same regions as the programs studied. Their loans carry a 20 percent flat monthly interest rate (equivalent to about 1,600 percent per year on a declining balance basis). This rate is much higher than the highest rates charged by the programs studied. Programs' unit managers claim that in areas where their institutions operate, these cooperative leaders generally make loans only to individuals who do not qualify for credit from their units.[14]

Most of the programs reviewed compete with BRI Unit Desas for voluntary savings. This can be difficult, as customers have tremendous confidence in the security of BRI deposits. Furthermore most of the programs require borrowers to deposit compensating balances that have restrictions on withdrawal. This practice can confuse customers and lead them to believe that they will also have difficulty withdrawing voluntary savings. LKP, which allows agents to accept deposits in the field, and BKD, which is located at the village level, can offer greater convenience than Unit Desas. Rural banks associated with PHBK frequently attempt to attract customers by offering interest rates on savings significantly in excess of those offered by BRI.

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[13] The program's nominal interest rate is 6 percent. However, upon full loan repayment, borrowers receive back 10 percent of their payments.

[14] Generally people who have a poor repayment history on previous loans or do not have their own business or farm, and are not steadily employed.

4. LESSONS LEARNED AND RECOMMENDATIONS FOR GOVERNMENT AND DONOR MICROFINANCE ACTIVITIES

This chapter summarizes lessons from this review, and suggests ways governments and donors could continue to support microfinance.

The programs reviewed above show that microfinance initiatives can:

- provide low-income people with a valuable service at an initial, affordable cost to governments or donors;
- obtain strong financial performance through the use of incentives for staff and clients;
- reduce, and even eliminate, the need for subsidies if they charge high real interest rates, aggressively pursue repayments, and achieve a significant volume of business;
- face political pressures that undermine their commitment to sound banking practices;
- be weakened through poorly-designed supervision systems;
- reach clients in remote areas through sub-district based units and field staff;
- operate efficiently without relying on intermediary organizations between banks and borrowers, group lending techniques, or savings requirements for borrowers;
- serve female borrowers without targeting them in marketing efforts if loan products meet women's needs and are accessible to them.

Poverty Reduction and Economic Development

Although this review does not measure these programs' impact on poverty reduction and economic development, a general examination of them indicates that expansion of microfinance is an efficient tool to promote these goals. These programs make very small loans, charge interest rates higher than those of commercial banks, and enforce debt repayment. The majority of their clients are too poor to secure the larger and less expensive loans available from commercial banks. The fact that the programs face overwhelming demand for credit despite their rates and strict enforcement of repayment, indicates that low-income clients obtain high returns from investment of these funds.

These programs required large subsidies when they are first introduced. However, after they incurred start-up costs, expanded in scale, and demonstrated a firm commitment to repayment performance, subsidies declined dramatically.

Supporting development of the microfinance market can be an efficient way for governments and donors to address poverty reduction and economic development. If unsubsidized private

provision of microfinance is expanding, government and donor support for this sector is not as important as it is if the microfinance market is less developed. However, even if private activity in this field is dynamic, governments and donors can work to promote the sector in remote areas where required initial start-up costs are high, and the private sector is hesitant to enter the market in the short- to medium-term.

Incentives for Customers and Staff

Microfinance programs cannot afford to closely monitor clients or staff. Carefully-designed incentives can motivate them to act in ways that strengthen program performance without requiring high costs. The programs reviewed provide multiple incentives to customers and staff. Most encourage staff to maintain high collection rates and maximize unit profits by linking staff compensation to the volume of repayments collected and/or profitability. They promote demand by making it relatively easy for customers to obtain loans. They facilitate physical access to services through the use of conveniently located facilities and/or field staff and credit agents. Most programs have relatively simple application procedures, and provide customers with loans within a few days or weeks of initial inquiry. None of the programs require physical collateral for small loans.

These programs encourage prompt repayment by linking borrowers' access to future loans and their future loan sizes to punctual repayment of current commitments. P4K experienced an increasing repayment problem when it attempted to control arrears by deviating from a policy of borrower repayment incentives. It canceled the P4K program in districts in which arrears ran higher than 10 percent. Under this policy, many groups with strong repayment records stopped paying when it became apparent that the program was to be discontinued in their area.

Limiting Subsidies

Many of Indonesia's government-supported microfinance programs continue to make low-interest loans, and frequently do not enforce repayment. These programs are expensive and create a negative demonstration effect. Because they provide cheap credit and do not enforce repayment, customers of more market-based programs expect the same conditions. If governments and donors ensure that all of their microfinance initiatives follow market-based principles, they can promote the long term health of the market.

However, the programs reviewed here demonstrate that limited start-up subsidies can play a valuable, and **temporary**, role in the microfinance market. If these programs had not had subsidies in their early years, they would have been forced to charge interest rates that clients could not pay. Subsidies have given these programs time to develop the approaches, scale, and staff and client experience necessary to move towards self-sustainability. These programs now require relatively modest subsidies although they make very small loans. The programs' average loan sizes ranged from 7 to 13 percent of GDP-per-capita (US$67 to US$130). This ratio for nine of the world's most respected microfinance programs is 16 to 136 percent.

These programs' attainment of self-sustainability is partially predicated on charging high real interest rates that their borrowers can afford. Most end users are paying interest rates of 100 percent per year or more (when calculated on a declining balance basis and taking into account

fees) under PHBK, LKP, and BKD. Yet demand for their loans are very strong. Many P4K groups make loans to their own members at a "flat" interest rate of 5 percent per month (equivalent to approximately 154 percent per year on a compounded and declining balance basis). Some BKK borrowers prefer a 1 percent flat weekly interest rate with weekly repayments to a 2.5 percent flat monthly interest rate on a loan with monthly repayments. Despite the cost of these programs' credits, repayment rates are generally high because borrowers know that prompt repayment will entitle them to additional loans.

The programs reviewed here have reduced their subsidy dependence over time. However, they, and others like them, could likely move more rapidly towards self-sustainability if they were aware of the full magnitude of their subsidies, and were under pressure to reduce them. Microfinance initiatives could (i) institute accounting and reporting formats that accurately track all (including in-kind) subsidies, and (ii) appropriately provision for bad debt and depreciate fixed assets. Their backers could enforce annual subsidy reduction goals.

Even programs that are not under pressure to become self-sustaining can help expand the market for unsubsidized microfinance. If subsidized programs track client repayment performance, they can provide credit history information to market-based lenders. This information will reduce the risk to these lenders of serving the microfinance market, and increase the likelihood of their entering it. A former Indonesian subsidized credit program called Kredit Mini/Midi established a base of good borrowers that the BRI Unit Desa system was able to use to rapidly build its unsubsidized and highly successful Kupedes program. Programs also can limit the number of highly-subsidized credits that clients can receive, which would encourage them to access unsubsidized service. P4K moves borrowers towards less-subsidized services by charging significantly higher interest rates after borrowers have obtained four low-interest loans.

Governments and donors also can minimize programs' long-term subsidy dependency by structuring their support of the sector in the form of **temporary** set-up subsidies (that would not include interest rate subsidies) for private providers that would subsequently have to generate profits to remain in the market. PHBK employs this approach by reducing over time the subsidy that institutions and client groups that participate in its program receive. Governments and/or donor also could encourage private firms to submit plans for the provision of a set of microfinance services at the village and/or sub-district level. Along with their plans, the institutions could submit a bid for the subsidy or start-up grant they would require to provide these services. The government and/or donor could then award funds to the institution that provided the best combination of business plan and subsidy/grant request.

Government Control

Government-owned financial institutions can be vulnerable to political considerations and public perceptions that depress system productivity. BKK and LKP faced pressure to relax their underwriting and collections efforts during the 1992 elections, and this risk is ever-present for state-owned financial intermediaries. Political interference in hiring has led LKP units to be overstaffed. Many BKD units' lending decisions are based partially on borrowers' standing in their villages rather than on their creditworthiness. Several of the programs have accounting and reporting procedures that are significantly influenced by political considerations. Finally,

managers with BKK and LKP said that the institutions' government ownership contributed to arrears problems. When the programs began, borrowers assumed that government programs would not strictly enforce repayment requirements.

Governments can weaken the microfinance sector by granting market power to government bodies that do not adhere to best practice standards. In Indonesia, Presidential Regulation No. 71/1992 requires that all microfinance institutions too small to become rural banks either discontinue deposit-taking services, or become cooperatives. Also, the government discontinued plans to expand the BKD system because the Department of Cooperatives feared that the units would compete with the microfinance activities of the *Koperasi Unit Desa* (KUD) village cooperative system. Instead of expanding BKD, the government created a similar system and placed it under the umbrella of KUD. Yet the cooperative movement has not always adhered to prudent banking standards in its microfinance activities.

If a government chooses to operate a microfinance program, it should ensure that political considerations do not undermine the program's commitment to sound banking practices. Granting a government-owned microfinance institution autonomous status can help reduce the political pressure it faces. For institutions that initially receive state subventions, governments can force them to operate with hard budget constraints, and reduce these grants over time thereby pressuring the institutions to achieve self-sufficiency. Governments can privatize institutions when they are commercially viability. For example, the BKK system no longer requires government subsidies to operate on a commercially-viable basis, and could likely be privatized. If the government develops a microfinance program that operates in collaboration with private banks, it can train the banks to provide microfinance services without continuing government assistance. PHBK operates in this way.

Widely publicizing government programs' successes in moving towards, or achieving, self-sustainability also helps reduce the political pressure to which they are subject. If a government takes public pride in its programs' financial successes, it will be less likely to undermine this achievement for political purposes. Donors could help ensure that this occurs by providing successful government programs with international exposure. The international attention that the BRI Unit Desa system obtained is partially responsible for the government's commitment to its self-sustainability.

Supervision

The Indonesian government is concerned about the quality of supervision of semi-formal financial institutions. Also, this analysis found that even BKK, LKP, and BKD, which are supervised by provincial development banks or a commercial bank, do not always follow best practice standards. To address this issue, Presidential Regulation No. 71/1992 requires semi-formal financial institutions that accept deposits to become rural banks or cooperatives. However the Regulation is difficult for many small institutions to comply with, and may not improve their supervision. Further, it has limited the volume of their lending growth and may have induced some to expand their branch networks in sub-optimal ways.

The long-term health of the microfinance market is predicated on good supervision. To improve supervision, microfinance institutions, with central bank assistance, could develop industry standards regarding underwriting; collections; lending limits; loan classification; provisioning for, and writing-off, bad debts; the acceptance of required and voluntary savings; accounting; reporting; etc. These standards could be applicable to semi-formal microfinance institutions; banks and cooperatives that function as microfinance institutions; and commercial banks' microfinance activities.

Ideally industries have primary responsibility for supervising themselves. One way to accomplish this is for microfinance institutions to contract for supervision services with commercial banks that the central bank judges to have the ability to perform adequate oversight. To ensure that supervisors correctly fulfill their duties, including enforcing the industry standards discussed above, the central bank could require regular supervision reports, and conduct random inspections of microfinance providers. Central banks could penalize supervising institutions that do not exercise due diligence. These institutions could bolster employee performance through incentive-based staff remuneration.

If a government does not believe that it can institute a supervision system rigorous enough to permit semi-formal financial institutions to accept deposits, it could allow these institutions to act as agents for banks authorized to accept deposits. The banks could pay the small financial institutions a fee for this service, and extend the same guarantee to savers who use this system as that enjoyed by their savings customers who access the banks directly. This practice would provide clients with convenient and relatively safe savings services. However, it would not be as advantageous to semi-formal financial institutions as accepting deposits on their own behalves because the funds mobilized would not be available to the institutions as liabilities.

Serving Clients in Remote Areas

Of the modalities reviewed here, the BKK/LKP system of a network of small, sub-district based units with fast and simple procedures and field staff is probably the best means of reaching households in low-density areas. This system functions well because (i) customers have relatively easy access to bank services; (ii) lenders control their field staff, thereby ensuring that they work in the institution's best interests, and (iii) services are delivered in a direct and cost-effective way.

The modalities that PHBK employs in remote areas are difficult and expensive to implement, and often do not produce good results. Borrower groups that function as quasi-financial institutions require a large amount of training and ongoing monitoring and guidance. NGOs that function as intermediaries frequently do not have the skills and commitment to function as efficient financial agents.

P4K delivers relatively low-cost credit to poor households in remote areas. However, the program's reliance on credit agents who are not controlled by the lender reduces the program's ability to enforce loan repayment and pursue repeat business. Further, borrowers have difficulty accessing the lender directly because bank branches are generally located in district capitals. If extension agents do not visit client groups on a regular basis, it is difficult for customers to obtain program services. Finally the system, jointly implemented by BRI and the Ministry of Agriculture,

is very cumbersome and inflexible. Borrowers can wait up to six months to receive a loan, versus days to weeks for most of the other programs reviewed here.

The BKD system of village-owned and operated units is very convenient for borrowers in remote areas and has minimal overhead costs. However, the units lack dynamism. Many make loans to only a small number of regular customers, and do not consider applications of many village residents who would pose reasonable credit risks.

These programs demonstrate that simple, inexpensive modalities that do not require intensive training for customers or intermediaries and which allow institutions to retain direct control over their field staff can facilitate serving remote clients cost-effectively. Incentives for staff to take advantage of prudent business growth opportunities will promote program performance.

Intermediaries Between Banks and Borrowers

The successes of BKK, LKP, and BKD demonstrate that microfinance initiatives need not rely on intermediaries between banks and borrowers to reach remote clients. Further, PHBK and P4K demonstrate that the use of intermediaries between banks and borrowers can be expensive and difficult to implement.

Of the three PHBK modalities, the one that makes use of NGOs as intermediaries between banks and clients requires the most intense program support and by far the highest interest rates to end users. It also suffers from the highest arrears problems because many NGOs are poorly trained and equipped to enforce repayment obligations. PHBK attributes some of its recent growth and improved performance to a significant reduction in its use of this lending modality.

P4K managers attribute part of the program's recent arrears problem to the fact that groups frequently rely on agriculture extension agents to deliver the groups' monthly loan installments to the bank. If extension workers do not visit the groups, many do not make other arrangements to pay. Because extension workers are not employed directly by the bank, the bank's ability to influence them is limited. This work also may distract the agriculture extension agents from their normal job responsibilities. Indeed, many agriculture extension experts recommend that extension agents' job responsibilities be confined to information dissemination (Benor and Baxter, 1987).

These programs demonstrate that microfinance initiatives need not rely on intermediaries to reach remote clients. Programs that make use of intermediaries can enhance results if the intermediaries are well-trained in banking services, their compensation is paid by the lender, and their remuneration is linked to the volume of business they generate and the lending repayment rates they obtain. If intermediaries are government employees with other job responsibilities, their performance should be carefully monitored to ensure that their financial activities do not impinge on their other work.

Customer Groups

These programs illustrate that lending to groups may not always be as efficient as lending to individuals. Of the programs reviewed here, BKK had the lowest subsidy levels in 1994 and 1995. Yet only a few BKK units began to make group loans at the end of 1995. The PHBK

program's experience shows that group-based programs can lower their subsidy levels by reducing group responsibilities. Programs that make group loans must train them to fulfill their responsibilities. The larger the group's role, the more expensive and time consuming this training. Further, all borrowers in a group obtain a loan at the same time, whereas the timing of their needs may differ. Group members usually must also participate in regular group meetings that carry opportunity costs. Finally, individuals incur a higher risk from obtaining a group loan because if one member of their group does not repay, other members must cover that person's debt if they wish to obtain credit in the future.

Many experts advocate the formation of customer groups to improve the efficiency of microfinance service delivery. However, lending to groups has a variety of costs to microfinance institutions and borrowers. Programs interested in group lending could provide borrowers with a choice between group or individual service. If the program believes that the administrative costs of individual lending outweigh the costs of training groups, the program could recoup the cost differential by levying a higher interest rate on small loans or setting a loan fee that does not vary by loan size. Customers could then decide whether the higher cost they would face for an individual loan was preferable to the monetary and opportunity costs they would incur with individual credit.

Required Savings

BKK's results demonstrate that institutions can obtain strong repayment performance without requiring borrowers to maintain savings accounts. Some BKK units require savings deposits from borrowers while others do not. Yet the two sets of units do not experience different repayment rates. Microfinance programs could experiment with savings specifications to determine if this requirement contributes significantly to their program's performance.

Serving Women and Farmers

Women account for 40 to 62 percent of these programs' borrowers. This level of female participation compares favorably to that of several of the world's most respected microcredit programs.[15] The fact that women account for a relatively large share of borrowers is primarily a "demand-pull" rather than a "supply-push" phenomenon. Most of these programs do not deliberately seek to attract female borrowers. Rather their loans are better suited to petty trading than to agriculture. In Indonesia, women are heavily represented among petty traders. Further, the programs transact business in villages and do not require collateral for small loans. These features facilitate women's access to services. The performance of these programs demonstrate that if microfinance institutions offer products that woman find useful and can access, they will seek these services without targeted marketing efforts.

Few of these programs offer loans that are of significant use to farmers. Loans are usually of short duration and payments are generally required on a weekly or monthly basis. Further, managers of several of the microfinance programs are reluctant to make loans for agricultural use.

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[15] Women account for 20 percent of ACEP's borrowers in Senegal, 24 percent of Unit Desa borrowers in Indonesia, and 26 percent of FINCA borrowers in Costa Rica.

If microfinance programs wish to provide services to farmers, they should tailor loan products to smallholders' needs. This might include offering seasonal loans that do not require frequent repayments. It is likely that these loans would not have to carry lower interest rates than current products to be affordable for at least some agricultural uses.[16] For programs that do not already offer these products, staff might benefit from training in how to evaluate the credit risk of agricultural loans, and encouragement to consider applications for agricultural uses. To reduce the risk of entering this market, programs could introduce these new loan products initially on a pilot basis in their best units. They could then carefully evaluate demand and repayment performance to determine the loan products and staff approaches that obtain the best results.

[16] Often farmers obtain seeds and fertilizer, and pay for these inputs with the crops they subsequently grow. In Indonesia, the implicit interest rates on these in-kind transactions can be as high as those microfinance institutions charge.

ANNEX 1: SOUTH KALIMANTAN'S BADAN KREDIT KECAMATAN (BKK) PROGRAM

Program Description

South Kalimantan's *Badan Kredit Kecamatan* (BKK) program began in 1985. It was modeled on the BKK system of Central Java but has always functioned independently of it. BKKs are semi-formal financial institutions owned by the South Kalimantan provincial government. Each unit is endowed with modest facilities and low-interest loans/capital endowment grants of approximately US$5,000.[17] USAID financed the first 16 of these facilities, and South Kalimantan's provincial government financed the 94 additional units. The provincial government is hoping to convert 10 BKKs to rural banks (BPRs). These 10 units have each received an additional capital endowment of Rp. 5 million (US$2,200). After the promulgation of the 1992 Banking Law and supporting Presidential Regulation, the provincial government stopped creating BKK units and instead began to found units called *Lembaga Pembiayaan Usaha Kecil* (LPUK). The only difference between BKKs and LPUKs is that the former accept deposits, and the latter do not. There are currently 34 BKKs and 76 LPUKs - one unit in each of the province's 109 sub-districts (*kecamatans*) and one additional unit.

BKKs and LPUKs (hereafter referred to collectively as BKKs) are similar in structure and function to NTB's LKPs discussed in Annex 2. Units are owned by the Province, and supervised by the provincial development bank (BPD). Each unit is located in a sub-district capital and serves most of the villages in that sub-district. Field staff make frequent visits to surrounding villages, and customers must come to the facilities for some transactions. The units do not receive fixed or regular subsidies. However, units were founded with an initial, low-interest capital loan/grant, and most receive their buildings and furniture free of charge from the Province or a district. The Province provides subsidized training, guidance, and supervision; and the provincial or district governments often furnish units with office equipment, motorcycles, and bicycles. Finally, units rarely pay taxes, and are not subject to the reserve requirements with which commercial banks must comply.[18]

Unit profits are divided among stakeholders as follows: 70 percent remain with the units in the form of retained earnings; 10 percent are divided among employees as a performance bonus; 5 percent are given to an employee welfare fund; 5 percent are given to a local government development fund; and 5 percent are given to the BPD as a fee for supervision and training.

Supervision. The units are supervised by the district branch of the BPD. In theory, the BPD makes all policy decisions for the BKKs units, including the types of savings and lending products units can offer, the terms they can charge on these instruments, how they should provision for bad

[17] Units are required to repay only the interest owed on the loan. Further, this interest is used to partially cover costs of supervising units and training unit staff. In practice, this initial loan functions as a capital endowment grant, and the annual interest serves as a partial annual fee for supervision and training.

[18] Rural banks (BPRs) are also exempt from this reserve requirement.

debt, when they should write off loans, what their underwriting and loan servicing procedures should be, whom they should hire, how they should train staff, etc. In practice, individual unit managers frequently assume at least minor levels of discretion with regard to many of these policies. The BPD has one full-time supervisor for every 8.5 BKK units. Supervisors visit units from 1 to 4 times per month.

Loan Products

Loan terms vary by unit, but none offers a loan for less than 10 weeks or more than 18 months. Officially, the interest rate on loans varies based on the loan's size and repayment frequency. In practice, the rate that an individual borrower pays depends on the options allowed to him or her by the branch manager. Interest rates range from a low of 3.5 percent per month on a declining balance basis with no savings requirement (an annualized rate of 51 percent), to a high of 1 percent per week on the initial loan balance with a 10 percent savings requirement (an annualized rate of about 196 percent). The most frequently quoted rate is 2.5 percent flat per month, with a 10 percent forced savings requirement for the 34 original BKKs and no forced savings requirement for new units. For a four month loan, these terms are equal to an interest rate of about 3.9 percent monthly or 59 percent per year on an annualized, declining balance basis assuming no forced savings requirement. For the units that require forced savings, the terms translate into an effective interest rate of 4.5 percent per month, or 70 percent per year. There is no fee charged on loans. Loans over Rp. 200,000 or 250,000 (US$86- $ 107) require land or a vehicle as collateral. Repayment frequencies range from weekly to monthly, depending on manager discretion and borrower preference.

Minimum and maximum loan sizes vary by unit. However the widest range appears to be Rp. 50,000 (about US$21) to Rp. 1 million (about US$428). For most units, loans above Rp. 200,000 to Rp. 250,000 (US$86- $ 107) must be approved by the head of the sub-district.

Until recently BKKs did not engaged in group lending. However, program supervisors familiar with Bank of Indonesia's PHBK program recognized the potential for group lending to reduce transactions costs. They introduced the concept on a pilot basis to one BKK unit in 1995.[19] Before the official trial period had ended, other units had spontaneously begun to copy the idea. Currently 59 groups have outstanding loans with BKK units. The BKKs are exclusively using PHBK's "Model 3" in which the units make loans to "channeling groups" that simply pass loan funds down to their members and pass up repayments. The groups do not attempt to act as financial intermediaries, and there are no NGOs involved in the process.

[19] The BKKs' adoption of the PHBK group lending system preceded PHBK's introduction to South Kalimantan.

Savings Products

As mentioned above, only the 34 original BKK units accept voluntary savings or require forced savings. Voluntary and compulsory savings earn an annual interest rate of 9 percent. This rate is currently slightly negative in real terms and is about equal to the rate paid by most of the other programs reviewed in this report. All BKKs are desperate for additional liquidity. Program organizers feel, however, that the supply of savings is very price inelastic and that increasing the interest rate paid on deposits will not significantly increase the volume of funds mobilized.

Staffing

The provincial BPD is responsible for staffing the BKK units, and staffing norms may be slightly high given that many units have limited field activities. However, staffing for BKKs is clearly more in line with unit needs than staffing for the LKPs in Sumbawa. The total number of staff per BKK unit ranges from 3 to 6. Staffing varies depending on unit volume and the time required for staff to reach the villages they serve. In most units, managers also serve as field agents, thereby using their time more productively than the managers of LKPs who do not leave the office. All staff must have at least a high school degree and pass a test to be eligible for employment. Most managers have only a high school degree. All staff are trained before they begin their jobs. Unit managers receive additional training one to two times per year. Other staff members receive additional training approximately once every other year.

Staff salaries are based on a complicated system and depend on the employee's position, tenure within the BKK system, and performance. Salaries range from a low of Rp. 123,000 (US$53) to a high of Rp. 418,500 (US$179) per month. On an annual basis, salaries range from 67 to 227 percent of per-capita GDP. Even the lowest possible salary for a BKK worker is almost as high as the highest salary paid to LKP staff in Sumbawa.

Also, all BKK employees of a given unit share a total of about 18.2 percent of nominal unit profits in the form of bonuses and a welfare fund.[20] For the average unit, this bonus and welfare fund would have amounted to approximately Rp. 669,000 per employee - equivalent to 1.6 to 5.4 months of salary. Thus, for most employees, their bonus will account for a significant share of their income. The small number of staff per unit - from 3 to 6 people - combined with the relatively large size of the potential bonus per worker should act as a significant motivator for employee performance.

[20] The actual formula to calculate this is somewhat complicated and includes a quarterly bonus equal to 5 percent of quarterly profits for the first three quarters, an end-of-year bonus equal to 10 percent of annual profits, and an employee welfare fund equal to 5 percent of annual profits. However, to calculate the unit's end-of-year profit, the quarterly bonuses are treated as an expense. Thus, the quarterly bonuses reduce slightly the value of the end-of-year bonus and welfare fund.

Underwriting and Loan Servicing

Prospective borrowers must have a business or employment to be considered for a loan. Unit personnel visit the work site of each prospective borrower before issuing the loan. At the same time, the loan officer checks on the prospective borrower's character by talking to the local village chief and/or neighbors. Most BKK managers have found that neighbors provide more accurate character references than village chiefs. If the borrower is married, his or her spouse must also sign the promissory note. Loans are disbursed 1 day to 2 weeks after the loan application is received. Borrowers must come to the unit twice to obtain a loan - once to complete the application and once to collect the funds.

Collections procedures vary across BKK units. Units serving villages a considerable distance from their facility send out field staff to collect installments. Units serving villages that have relatively easy access to their facility require that borrowers make payments at the unit. However, even these latter units send staff to visit borrowers' villages if payments are more than 2 to 7 days late. There is no penalty for late payments. Nevertheless, previous repayment performance is taken into account when determining whether to issue additional loans. Units give new borrowers small loans and allow subsequent loans to rise in value as the borrower proves repayment reliability.

Program Performance

This section reviews program performance as measured by sustainability and outreach. Sustainability is measured by the program's arrears rate, profitability, and the size of the subsidy required to sustain operations. Outreach is measured by the volume of annual lending and savings activities (scope), and the population it serves (depth of market penetration).

Sustainability. According to data supplied by the BPD, for the 34 BKKs in existence before 1993, the volume of loans in arrears by more than 3 months was equal to 26 percent of the volume of outstanding loans in 1995. Because units do not write off loans, it is probably more meaningful to simulate arrears and default rates if the institution wrote off 100 percent of its loans in default each year. If the arrears rate is recalculated in this way and all loans more than 90 days overdue are considered to be in default, then the volume of loans in arrears was 6 percent of net outstanding loans in 1995. Loans in default were equal to 3.5 (Table 12). Arrears and defaults were also relatively low in 1994. For

Table 12
Adjusted Annual Arrears and Default Rates[a] for the 34 Original BKKs (Percent)

	1993	1994	1995
Arrears	27.0	6.2	5.9
Default	23.0[b]	3.0	3.5

a/ The volume of loans in arrears and in default divided by the volume of outstanding loans. Loans in default from previous years that have not yet been written off are subtracted from the annual volume of loans in default and from annual outstanding loans.
b/ This figures includes an adjustment to correct for previously unrecorded defaults. However, the actual default rate in 1993 was high compared to that of previous and subsequent years.

the last two years, the program's arrears rate and default rate are very sound by international microcredit standards.[21]

However, loans in default were 23 percent of total loan volume in 1993. The high default rate in 1993 is partially an artifact of an audit in that year which required a one-time correction for previously unrecorded defaults. Thus, to some extent, the 1993 figure represents the stock of defaults up to that date, and not simply the annual incremental defaults occurring in that year. In addition however, it appears likely that political pressures on lending policy in 1992 (caused by the election in that year) led to unprecedented arrears in 1993.

It is very difficult to estimate true unit profitability given the diverse, ad hoc, and often unrecorded in-kind subsidies received by the 110 units from the province, the BPD, and districts. Further, the way in which provisioning for bad debt is undertaken differs sharply from accepted best practice. If all of these factors are ignored, the 34 original BKKs had a real (above inflation) return on assets of from 6 to 10 percent over the last three years. This analysis made rough estimates for expenses for depreciation of fixed assets, adequate loan loss provisioning, taxes, reserve requirements, full supervision costs, and market returns to liability holders.[22] In addition, it revised the units' average outstanding assets to take into account adequate loan loss provisioning.[23] After these adjustments, the units' inflation adjusted return on average assets was -20.9 percent in 1993; 0.5 percent in 1994; and 1.5 percent in 1995 (Table 13).[24]

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[21] For example, the Committee of Donor Agencies for Small Enterprise Development (1995) set as an acceptable standard for microenterprise lending, that 10 percent or less of total loans should have late payments of 30 days or more, and lenders should have annual losses from defaults of 4 percent or less of outstanding loan volume. For the last two years, BKK's arrears rate are below the 10 percent level even though it includes loans in arrears by one day or more. The program's default rate over the last two years is below 4 percent.

[22] The BKK system funds part of its portfolio from savings accounts required from borrowers. These required savings accounts earn an interest rate below that which the program would have to pay to obtain marginal additional resources from another source. For the purposes of this analysis, this practice is considered to be equivalent to generating additional fee income from loans and is not counted as a subsidy.

[23] This analysis did not have information concerning when gifts of assets and equipment were received. Thus, it was not possible to adjust equity and assets to reflect owners' initial contributions and to then depreciate these assets over their life. Thus the estimated depreciation expense is subtracted from annual profits, but its value is not deducted from assets or from equity.

[24] ROA figures are higher and lower than those typically seen for financial institutions because BKKs (like most microfinance institutions in Indonesia) have relatively high equity to assets ratios.

Table 13
Estimated Earnings Adjusted for Subsidies and Bad Debt Expenses for 34 Original BKKs

Earnings Measure	1993	1994	1995
Adjusted real ROA (percent)	-20.9	0.5	1.5
Adjusted real ROE (percent)	-29.7	7.5	12.0
Estimated Subsidy Dependency Index (percent)[a]	118	0	0
Average interest rate charged (percent)[b]	64	64	64
Required annual interest rate to cover all costs including market return on equity (percent)	139	64	64

a/ The percent increase in the interest rate that is required if the units were to be fully self-supporting including paying a market rate of return to equity holders.
b/ BKK interest rates vary by loan size and repayment frequency. This interest rate is for one of BKKs most common loans - a four month loan with a 2.5 percent per month flat interest rate, payable in monthly installments, with a 5 percent forced savings requirement. Five percent was selected for the savings requirement because some BKKs require a 10 percent savings component while others require none.

Taking into account the above additional expenses, the units would have earned a real, adjusted return on equity (ROE) of -29.7 percent in 1993; 7.5 percent in 1994; and 12.0 percent in 1995.

Finally, assuming equity holders earned an interest rate equivalent to the average 3 month time deposit rate plus a 4 percentage point spread, the units' estimated Subsidy Dependency Index (the percent increase in the interest rate that is required if the units are to be fully self-supporting including paying a market rate of return to equity holders) would have improved sharply from 118 percent in 1993 to 0 percent in 1995 (Table 13).[25]

As these figures indicate, 1993 was a very troubled year for the BKK system. However, if only figures for the last two years are considered, the BKKs are functioning a sound basis. The units did not require subsidies to operate on a sustainable basis in 1994 and 1995, and could have paid equity holders a satisfactory return.

The program's real adjusted ROA and ROE improved from 1994 to 1995 while its Subsidy Dependency Index (SDI) was constant. This occurred because Indonesia's real (inflation adjusted) interest rates increased dramatically in 1995. The program's ROA and ROE increased from 1994 to 1995 due primarily to the fact that loan volume increased very significantly over the period but many expenses remained fixed. Like the program's ROE and ROA, the SDI benefited from the improvements in business performance. However, the SDI was hurt by the increase in real market interest rates because the SDI is calculated assuming a market interest rate return to equity holders, not a fixed real return. The damage that the SDI sustained from the increase in market interest rates was approximately equal to the benefit of improved business performance.

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25 This analysis is based on a Subsidy Dependency Index (SDI) for each program. See Annex 7 for a description of how the SDI is calculated.

Outreach Scope. As indicated above, BKK units are now located in all 109 sub-districts in South Kalimantan. Information on the percent of total villages served by these facilities was not available. However, program managers estimate that units reach over 50 percent of all villages in the province.

In 1995, total lending for the 110 units amounted to Rp. 7.8 billion (US$3.4 million). This is equivalent to approximately Rp. 70.9 million (US$31,000) per unit. Lending volume for the entire system increased by 60 percent in real terms in 1994, and 37 percent in real terms in 1995. The units made 34,518 loans in 1995, up from 18,080 in 1993 (Table 14). If figures exclude lending by the 76 units founded in 1994 and 1995, then total loan volume for the 34 existing BKKs increased by 20 percent in real terms in 1994 and 19 percent in real terms in 1995. Existing BKK units had an average volume of Rp. 148 million (US$63,000) each in 1995. Existing units made approximately the same number of loans in 1995 as they did in 1993, indicating that their real lending growth was derived from an increase in real average loan sizes.

Table 14
BKK Annual Lending

	1993	1994	1995
Nominal loan volume (Rp. million)	2,962	5,008	7,800
Growth in real loan volume (percent)	NA	56	42
Nominal loan volume (US$)	1,410,333	2,297,110	3,421,250
Pre-1994 unit volume percent of total volume	100	77	65
Number of loans for all units	18,080	31,870	34,518
Growth in number of loans (percent)	NA	76	8

As indicated above, only the 34 original BKKs collect savings. In 1995, total savings for these 34 units stood at Rp. 974 million (about US$427,000). The real volume of savings deposits grew by 77 percent in 1994 and 43 percent in 1995. By the end of 1995, savings represented 40 percent of outstanding loans net of bad debt for these 34 units.

Table 15
Voluntary and Required Savings for the BKK Units that Accept Deposits

	1993	1994	1995
Total nominal savings (Rp. million)	323.4	621.2	974.4
Real growth in savings (percent)	NA	77	43
Total nominal savings (US$)	153,990	284,948	427,357
Total savings percent of total outstanding loans	30.0	37.6	40.3
Estimate of voluntary savings percent of net outstanding loans[a]	16.1	27.0	31.0
Real growth in voluntary savings (percent)		142	56

a/ The volume of voluntary savings is compared to that of outstanding loans net of required savings because in practice, savings required to obtain a loan can be viewed as equivalent to borrowers receiving a smaller loan. Comparing voluntary savings to loans net of required savings allows an analysis of the importance of voluntary savings in funding loans.

Information was not available to separate voluntary from required savings. However, at a minimum, voluntary savings would have accounted for 31 percent of outstanding loans net of bad debt and required savings in 1995,[26] up from 0 percent in 1992 when voluntary savings accounts were first introduced (Table 15).

Outreach Depth. The BKKs do not keep data on borrower income. Borrowers are primarily petty traders. Approximately 40 percent are women. The average loan size for the units in 1995 was about Rp. 226,000 (US$99). This is probably lower than the average loan size for the PHBK program, but higher than the average loan size per individual under the LKP, P4K, and BKD programs. It is equivalent to about 10 percent of per capita GDP.

BKK units are located in all 109 sub-districts in South Kalimantan. However, the units' ability to penetrate into remote areas varies by region. The BPD claims that some units serve villages as far as 70 kilometers away. Interviewed unit managers reporting serving clients as far as 15 to 25 kilometers away from their facility. The unit serving clients 25 kilometers away reported that the

[26] As discussed above, units require mandatory savings from borrowers of from 0 to 10 percent of loan volume. The outstanding volume of mandatory savings is estimated by assuming that all loans are matched by the maximum level of required savings. Information on the initial loan sizes of all loans outstanding at the end of the year was not available in an aggregated format. The author multiplied the year end outstanding balances of loans by 10 percent to obtain an estimate of the program's volume of required savings at year end. This will underestimate required savings as the amount of required savings is based on the size of initial loans, not outstanding loan balances. However, it will overestimate required savings in that many loans have a required savings rate of less than 10 percent. The volume of voluntary savings is assumed to be equal to the total volume of savings minus the estimated volume of required savings.

trip took two hours each way by motorcycle due to the sub-district's difficult terrain. This unit was only able to serve 15 of the 27 villages in its sub-district due to the area's limited infrastructure.

Productivity. BKKs operate with fewer staff per unit than LKPs and make better use of the staff they employ.[27] The district branch of the BPD has one full-time supervisor for every 8.5 units, as compared to the LKPs' one supervisor for 4 units. Also, some BKK unit policies appear to be more streamlined than those in the LKP program. For example, LKP requires borrowers to visit the unit office at least three times to obtain a loan. The BKKs require only two visits.

However, it is likely that the BKKs could improve their operating procedures. Like LKPs, BKKs can be vulnerable to political considerations. For example, arrears jumped sharply in 1993 due partially to political pressures to relax underwriting procedures before the 1992 election. Also, profits are first calculated after subtracting bad debt expenses. However, for political reasons, these expenses are subsequently added back to income after the books have been closed. Thus, despite the fact that a large share of their portfolio is in default and that units record a heavy annual bad debt expense, they do not accumulate loan loss reserves.

Furthermore, BKKs offer relatively limited services at the village level. BKKs do not allow field staff to accept savings deposits. In contrast, LKP savers can make deposits through field staff. Many BKK units require borrowers to make their monthly repayments at sub-district units rather than allowing them to give field staff the funds. In general, the BPD deliberately limits the scope of BKK field activities to minimize the risk of malfeasance and because, managers claim, the units' lean staffing does not allow for lengthy visits to any single village. With the information available, it is not possible to evaluate whether the program's savings in personnel costs and improved security compensate for the loss of customer convenience. In all probability, the answer to this question varies by sub-district.

Reasons for Evolution in Program Performance. The BKK system performed very poorly in 1993. In part this was due to larger economic concerns that shook Indonesia's entire financial system. Also, the problem appears worse on paper than it actually was because records of arrears rates were corrected in that year. Finally, political interference negatively impacted units' lending decisions. Since that time however, units have performed relatively well as measured by the ROE and ROA they would have obtained in the absence of subsidies, and the fact that the program does not require these subsidies to operate sustainably. The strong growth in loan volume over the last few years for existing BKKs demonstrates that demand for their product is high.

Program managers claim that for each new facility, arrears begin high and then decline over time. Borrowers initially assume that this is a subsidized government program, and it takes time to educate clients to the fact that the loans must be repaid. However, the BPD claims to have refined this education process over time. Thus, units opened in the last several years have much lower initial arrears rates than units opened in the 1980s and early 1990s. Older units often continue to have a large percent of their assets in default, but this is primarily due to the fact that

[27] Although LKPs do make almost three times the number of loans per unit as the BKKs.

defaulted loans are not written off their books. However program supervisors fear that, as occurred in 1992, units will face political pressure to reduce underwriting standards before the 1997 election.

Response to Regulation No.71/1992 Supporting the 1992 Banking Law

BKK units established before 1992 are exempt from the Regulation's stipulation that financial institutions that accept deposits must either meeting a minimum capital requirement or becoming cooperatives. The units established after 1992 (the LPUKs) must conform with the Regulation's guidelines. Thus, the BPD decided that the LPUKs would not accept deposits.

The fact that new units do not accept required or voluntary savings will clearly hurt the institutions and their clients. For the four units visited, managers cited a lack of funds to meet effective demand as their most critical or second most critical problem. For BKKs that are permitted to mobilize savings, voluntary savings were equal to at least 31 percent of outstanding loans net of required savings in 1995. Not only will an inability to mobilize savings retard lending growth for the new units, but it will also deny unit customers access to a very valuable service. Finally, it will deprive managers of a useful means of gauging the creditworthiness of potential loan clients.

While the BPDs in NTB and South Kalimantan supervise the same type of institution and face the same Banking Law and Regulation, they are interpreting compliance with the regulations in very different ways.[28]

Competition

All of the units interviewed faced only limited competition for credit clients. Units reported that only two other lending programs operated in their areas - the BRI Unit Desa system and semi-formal lending by cooperative leaders. None of the units reported competition from rural banks (BPRs). If average loan size can serve as a proxy for income, then it is likely that BKKs serve a much poorer clientele than BRI, and one that may have very little access to BRI loans.[29] However, BKKs' underwriting requirements for loans over Rp. 250,000 (US$110) do not differ significantly from BRI's. Thus, it is reasonable to assume that many of the BKKs' larger clients could access BRI loans. Furthermore, BRI loans carry a lower interest rate than loans from BKK.[30] Nevertheless, BKK managers claimed that they competed very effectively with BRI by

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[28] The BPD in NTB will convert some of its existing LKP units into BPRs and others into nominal cooperatives. Those converted to cooperatives will redefine voluntary savings as "mandatory members' contributions". BPD managers in NTB also said that they foresaw no difficulty in establishing new units which would accept deposits using the same nominal cooperative structure.

[29] The average ratio of loan-size-to-GDP-per-capita for BRI was 81 percent in 1993. This compares to a ratio of 10 percent for the BKK system in 1995.

[30] BRI KUPEDES loans carry a 32 percent effective annual interest rate if repayment is prompt. Interest rates on BKK loans vary from 51 to 81 percent.

providing loans more quickly, requiring less paperwork, and reducing transactions costs to clients through field staff visits to clients' businesses.

The only other major source of financing available to BKK clients is loans provided by cooperative leaders. These individuals use their position in the cooperatives to function as private moneylenders. The rate they charge (20 percent flat per month) is about 3 times as high as **the highest** rate BKK units charge. BKK unit managers claim that these individuals make loans only to people who do not qualify for BKK loans.[31]

BKK units compete with BRI for voluntary deposits. BKK offers an interest rate on deposits approximately equal to that of BRI's SIMPEDES program. Despite the fact that BRI has a very strong reputation for stability and offers various non-financial incentives to attract savers, the volume of BKK's voluntary savings has grown rapidly. Thus, it appears that BKK has been able to compete with BRI for voluntary savings.

[31] Generally people who have a poor repayment history on previous loans or do not have their own business or farm, and are not steadily employed.

ANNEX 2: LUMBUNG KREDIT PEDESAAN (LKP) PROGRAM

Program Description

The province of Nusa Tenggara Barat (NTB) owns a system of semi-formal financial institutions called *Lumbung Kredit Pedesaan* (LKP). The author visited LKP units in Dompu District, and this report reviews only the LKP units located in this district. One unit was established in each of Dompu's four sub-districts between 1989 and 1991. Each unit is located in a sub-district capital and serves most of the villages in that sub-district via approximately weekly field staff visits to the villages. Units have a very similar structure to that of the BKKs.

Three of the units were founded through capital endowment grants (about US$5,800 to US$8,400 per unit) from USAID, and the fourth received an initial endowment by the province. The units do not receive fixed or regular subsidies from the government. However, over the last several years, both the provincial and district governments have provided the units with motorcycles, upgraded facilities, and modest additional capital endowment grants. In addition, supervision costs are partially borne by the provincial development bank (BPD). Finally, units do not pay taxes.

In theory, unit profits are divided among stakeholders as follows: 50 percent to the provincial (and sometimes district) government as dividends; 15 percent to general reserves; 15 percent to special reserves; 10 percent to employee bonuses; and 10 percent to an employee welfare fund. In practice, the provincial and district governments' annual dividends and the funds for general and special reserves are added to retained earnings. Thus, the units actually retain 80 percent of their profits.

Program Supervision. The units are supervised by the district branch of the BPD. The BPD makes all policy decisions for the LKP, including the types of savings and lending products units can offer, the terms they can charge on these instruments, how they should provision for bad debt, when they should write off loans, what their underwriting and loan servicing procedures should be, whom they should hire, how they should train staff, etc. The Dompu district branch of the BPD has one full-time supervisor to oversee the four LKPs in its district. Two of these units are within walking distance of the BPD branch. Despite the fact that the supervisor oversees only 4 units, one unit manager was able to effectively bankrupt his unit by making fraudulent loans and embezzling funds.

Loan Product

LKPs have one loan product, a 12 week loan repayable weekly in 12 equal installments. The first installment represents the interest due on the loan, the next a forced savings payment, and the final 10 are repayment of capital. Many other government-owned, semi-formal financial institutions in Indonesia offer the same product with similar repayment terms. The effective interest rate for this product, including a fee of Rp. 2,500 (US$1.10), is about 8.3 percent per month or 160 percent annually on a declining balance basis. This figure assumes that the forced savings, and the interest earned on this savings, is returned after the loan is repaid, as BPD supervisors claim.

The loan size ranges from Rp. 50,000 (about US$21) to Rp. 500,000 (about US$214). Loans above Rp. 200,000 (US$86) must be approved by the BPD which supervises the LKPs. Loans do not require physical collateral.

Group Lending. LKPs do not offer group loans. NTB's BPD staff who were supervising the LKP system did not believe that this lending modality would be useful for LKP, although the PHBK program was operating in the same area and presumably demonstrating some of the advantages of group lending schemes.

Savings Product

Units have one voluntary savings instrument - a demand deposit with no restrictions on withdrawal. The instrument pays a 10 percent annual return. This rate is almost identical to the rates paid by the other programs reviewed in this report, and is also about the same as the rate BRI Unit Desa pays on small demand deposits. Forced savings also carry a 10 percent annual interest rate.

Staffing

Units are staffed by from 6 to 11 employees. All employees must have at least a high school degree, and unit managers should have a college degree. Staff must pass a test before they are eligible for employment. All staff receive one month of training before they begin work.

In 1995, staff salaries range from Rp. 90,000 (US$39) to Rp. 150,000 (US$64) per month. On an annualized basis, this is equivalent to a range of 49 to 79 percent of per-capita GDP. In addition, all employees of a given unit share a total of about 20 percent of nominal unit profits in the form of bonuses and a welfare fund. For the most successful unit, this bonus and welfare fund would have amounted to an average of about Rp. 400,000 per employee - equivalent to from 2.5 to 4.5 months' salary. Employees are eligible for an additional bonus if 94 percent or more of total payments due during a 3 month period have been collected by the end of that period. However, none of the units have been able to achieve this collection rate for the last several years.[32]

Underwriting and Loan Servicing

Prospective borrowers must obtain a written recommendation from their village headman and have a functioning business. Unit personnel visit the business site of each prospective borrower to verify business viability before issuing the loan. If the borrower is married, his or her spouse must also sign the promissory note. Loans are disbursed within two weeks of the unit receiving the borrower's application. Each borrower is visited weekly to solicit his or her repayment installment. Borrowers who do not repay are also visited weekly to attempt to collect past due funds. The staff attempt to find out why repayments are delayed and encourage partial repayments for delinquent borrowers.

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[32] This is not surprising given that the units carry loans on their books which have defaulted some time ago and should be written off.

Program Performance

This section reviews program performance as measured by sustainability and outreach. Sustainability is measured by the program's arrears rate, its profitability, and the size of the subsidy required to sustain operations. Outreach is measured by the volume of annual lending and savings activities (scope) and the population it serves (depth of market penetration).

Sustainability. This analysis estimates arrears rates assuming that units wrote off 100 percent of their loans in default each year.[33] If the arrears rate is recalculated in this way, the volume of loans in arrears is equal to 20 percent of net outstanding loans in 1995 for the system as a whole (excluding one unit for which data are not available). In all, one unit has maintained consistently low arrears rates since 1992. The other three units had loans in arrears equal to 18 percent of total loans over the period. For Hu'u, loans in arrears reached 78 percent of total loans in 1993. The program did not have arrears data for the unit thereafter (Table 16). The program's arrears rate is significantly higher than that which would be considered sound by international microcredit standards.[34]

Table 16
Adjusted Annual Arrears Rates[a] for LKP Units in Dompu District (Percent)

Units	1992	1993	1994	1995
Total	16	30	NA	20[b]
Hu'u	20	78	NA	NA
Montabaru	4	4	NA	7
Sariutu	23	23	NA	37
Bada	18	22	NA	22

a/ (Volume of Loans in Arrears in Year 1 - Volume of Loans in Default in Year 0)/
(Outstanding Loan Volume in Year 1 - Loan Volume in Default in Year 0).
b/ Excludes the Hu'u unit for which 1995 data were not available.

[33] The LKP system defines loans in default as being more than 90 days late in payment.

[34] The Committee of Donor Agencies for Small Enterprise Development (1995) set as an acceptable standard for microenterprise lending, that 10 percent or less of total loans should have late payments of 30 days or more. BKK's arrears rate in 1995 includes loans that are one day late or more, so it is not directly comparable. However, it is twice as high as the standard, and did not include arrears information for the program's most troubled unit.

Simulating the units' default rates if LKP wrote off 100 percent of its loans in default each year, the volume of loans in default is equal to 5.5 percent of net outstanding loans in 1995 for the system as a whole (excluding one unit for which data is not available). Two units have maintained consistently low default rates over the last three years. One unit had low default rates in 1993 and 1994, but experienced a significant upsurge in 1995, and one unit experienced default rates in excess of 30 percent for the two years for which information was available (Table 17). The program's default rate is somewhat higher than that which would be considered sound by international microcredit standards.[35]

Table 17
Adjusted Annual Default Rates[a] for LKP Units in Dompu District (Percent)

Units	1993	1994	1995
Total	11.5	3.8	5.5[b]
Hu'u	45.8	31.0	NA
Montabaru	1.7	0.3	1.1
Sariutu	2.4	3.6	0.6
Bada	2.2	1.6	12.6

a/ (Volume of Loans in Arrears by 90 Days or More in Year 1 - Volume of Loans in Arrears by 90 Days or More in Year 0)/
(Outstanding Loan Volume in Year 1 - Loan Volume in Arrears by 90 Days or Mores in Year 0).
b/ Excludes the Hu'u unit for which 1995 data were not available.

It is very difficult to estimate unit profitability as income statements and balance sheets provided by the BPD contain some apparent errors, omissions, and inconsistencies. Further, basic earnings measures, such as return on equity and return on assets, are problematic given that the LKPs receive endowment grants and in-kind gifts including supervision by the BPD at a subsidized cost. The units receive an additional implicit subsidy in that they do not pay taxes on income. Finally, the units do not adequately provision for bad debt.

If all of these factors are ignored, the three units for which information is available showed a combined real (above inflation) return on assets of 1 to 6 percent over the last three years. However, if rough estimates of expenses for depreciation of fixed assets, adequate loan loss provisioning, taxes, reserve requirements, and full supervision costs are made,[36] and the units'

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[35] The Committee of Donor Agencies for Small Enterprise Development (1995) set as an acceptable standard for microenterprise lending, that lenders should have annual losses from defaults of 4 percent or less of outstanding loan volume. LKP's 1995 rate is above this level and did not include defaults for its most troubled branch.

[36] There is no need to impute additional interest to LKP liabilities because LKP pays market interest rates on liabilities. For a number of years the LKP system had loans from the provincial BPD for which it paid below-market "interest rates" which also served as fees for supervision. However, these loans were converted to equity in 1995. For the purposes of this analysis, these loans are treated as equity for all years and the interest expense/supervision fee is treated as a supervision fee.

The LKP system also funds part of its portfolio from savings accounts required from borrowers. These required savings accounts earn an interest rate below that which the program would have to pay to obtain marginal additional resources from another source. For the purposes of this analysis, this practice is

average outstanding assets are adjusted to take into account adequate loan loss provisioning,[37] then the units' adjusted real return on average assets was -22.3 percent in 1993, -8.8 percent in 1994, and -5.2 percent in 1995 (Table 18). Taking into account the above additional expenses, the units' adjusted real return on average equity was -33.3 percent in 1993, -9.7 percent in 1995, and -2.8 percent in 1995.

Assuming that equity holders earned an interest rate equivalent to the average 3 month time deposit rate plus a 4 percentage point spread, the units' Subsidy Dependency Index (the percent increase in the interest rate that is required if the unit were to be fully self-supporting including paying a market rate of return to liability and equity holders)[38] would have improved sharply from 104 percent in 1993 to 24 percent in 1995.[39] The program's equity to assets ratio was 68 to 73 percent from 1993 to 1995. Reducing this ratio to a level more in line with that of commercial banks and replacing equity with liabilities would have reduced the program's Subsidy Dependency Index. However, the program could not have achieved full self sustainability through this approach.

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considered to be equivalent to generating additional fee income from loans and is not counted as a subsidy. However, footnote 39 on page 47 examines what the program's total subsidy would have been if access to these required savings were treated as a subsidy.

[37] This analysis did not have information concerning when gifts of assets and equipment were received. Therefore, it was not possible to adjust equity and assets to reflect owners' initial contributions and to then depreciate these assets over their life. The estimated depreciation expense is subtracted from annual profits, but its value is not deducted from assets or from equity.

[38] See Annex 7 for a description of how the SDI is calculated.

[39] LKP, like the other programs reviewed here, funds part of its portfolios from savings accounts required from borrowers. If this forced savings policy were considered a subsidy, the amount of the subsidy would be equal to the difference between the interest paid on the required savings and the interest the institution would have had to pay on marginal additional liabilities. When the SDI is recalculated to incorporate this additional subsidy, it increases from 104 to 107 percent in 1993, and from 24 to 27 percent in 1995.

Table 18
Estimated LKP Earnings Adjusted for Subsidies and Bad Debt Expenses

Units	Earnings Measure	1993	1994	1995
Three of four units				
	Adjusted real ROA (percent)	-22.3	-8.8	-5.2
	Adjusted real ROE (percent)	-33.3	-9.7	-2.8
	Subsidy Dependency Index[a] (percent)	104	41	24
	Current interest rate (percent)	160	160	160
	Required interest rate to cover all costs including market return on equity (percent)	325	225	198
Best performing unit				
	Adjusted real ROA (percent)	-0.2	-0.9	4.9
	Adjusted real ROE (percent)	5.6	3.1	11.9
	Subsidy Dependency Index[a] (percent)	0	10	-4
	Current interest rate	160	160	160
	Required interest rate to cover all costs including market return on equity (percent)	160	176	154

a/ The percent increase in the interest rate that is required if the units were to be fully self-supporting including paying a market rate of return to equity holders.

In 1995, the program would have had to charge a 198 percent annual interest rate to completely eliminate all program subsidies and pay liability and equity holders a market return on their investments. This rate is higher than the rate required for BKK and P4K, but below the rate required for PHBK. It is about 24 percent higher than the rate the units currently charge.

Again taking into account the additional expenses above, the best performing LKP unit could have provided an adjusted real return to equity holders of from 3 to 12 percent since 1993 . This unit's subsidy dependency index would have varied from 10 to -4 percent over the last three years (Table 18). The interest rate required to eliminate all of the unit's subsidies ranged from 154 to 176 percent.

Outreach Scope. The district of Dompu has four LKP units for its six sub-districts. When the units were founded, the district had only 4 sub-districts. District leaders hope to be able to create new units for the new sub-districts, but have no firm plans for doing so. Units serve 34 of the 45 villages (76 percent of villages) in the sub-districts where they are located.

In 1995, total lending for the four units was about Rp. 714 million (US$313,000). This is equivalent to an average loan volume of Rp. 178 million (US$78,000) per unit. However, loan volume is not divided equally among units. The unit with the largest volume accounted for 47 percent of all loans, and the unit with the smallest volume accounted for 4 percent. Over the last five years, combined lending for the four units has increased slightly in real terms in every year except 1993. However, this pattern belies important differences across units. Specifically, one unit grew at a real compound annual rate of about 32 percent, while lending volume in each of the other three units declined in real terms by an annual average compound rate of from 1 to 28 percent. The number of loans issued by the four units in 1994 was less than one-half of the number issued in 1991. Lending rebounded somewhat in 1995, when the number of loans issued approached two thirds of the number in 1991 (Table 19).

Table 19
LKP Annual Loan Volume

	1991	1992	1993	1994	1995
Nominal loan volume (Rp. million)	485,722	527,539	459,889	510,269	713,555
Growth in real loan volume (percent)	NA	3	-16	5	23
Loan volume (US$)	246,559	258,598	218,995	234,068	312,963
Number of loans issued	6,409	4,689	3,079	3,122	4,148
Growth in number of loans issued (percent)	23	-27	-34	1	33

Savings deposits grew rapidly between 1991 and 1993 (Table 20). However, savings declined at a real annual rate of 21 in 1994 and 12 percent 1995. Trends in savings for individual units approximately followed this general pattern. By the end of 1993, voluntary savings were equal to 35 percent of units' outstanding loans net of bad debt and required savings, but declined to 18 percent by 1995.[40] In 1995, total savings for the four units stood at Rp. 64 million (about US$28,000).

Table 20
LKP Required and Voluntary Savings

	1991	1992	1993	1994	1995
Total nominal savings (Rp. million)	43.2	57.3	77.9	67.1	64.4
Real growth in savings (percent)	NA	23	24	-21	-12
Total nominal savings (US$)	21,953	28,106	37,093	30,758	28,249
Total savings percent of total outstanding loans	36	39	50	38	30
Voluntary savings percent of net outstanding loans[a]	21	22	35	22	18
Real growth in voluntary savings (percent)		15	50	-31	-6

a/ The volume of voluntary savings is compared to that of outstanding loans net of required savings because in practice, savings required to obtain a loan are equivalent to borrowers receiving a smaller loan. Thus, comparing voluntary savings to loans net of required savings allows an analysis of the importance of voluntary savings in funding loans.

[40] The volume of voluntary savings is compared to that of outstanding loans net of required savings because in practice, savings required to obtain a loan are equivalent to borrowers receiving a smaller loan. Thus,

Outreach Depth. The LKPs do not keep data on borrower income. Borrowers are primarily petty traders. Approximately 60 percent are women. The average loan size for the four LKP units in Dompu in 1995 was about Rp. 170,000 (US$75). This is lower than the likely average loan size for the BKK and PHBK programs, and only slightly higher than the average loan size per individual under the P4K program. It is equivalent to about 7 percent of per capita GDP.

The BPD claims that units may serve villages as far as 100 kilometers away via bus trips that might take up to 3 to 4 hours each way. In practice, the reach of individual units varies. One unit said that it did not visit any villages further than one hour away from the sub-district capital by motorcycle. In practice, this meant that its range was limited to less than 30 kilometers. This range excluded the unit from serving one of the villages in its sub-district.

Productivity. While most units are recording at least a small annual profit on paper, their real, unsubsidized returns are generally negative. Furthermore, the units are not being managed with a keen regard to efficiency. The provincial BPD is responsible for staffing the units, and is using the LKPs as a means of employment generation without regard to unit needs. For example, one unit had from 6 to 8 staff members in the unit office (not including field staff) on any given day to handle from 10 to 30 transactions. The district branch of the BPD had one full-time employee to supervise the four units, a task that should have taken no more than 25 percent of his time. Excessive staffing creates unnecessary costs for the units, thereby depressing profits. Furthermore, it dampens employees' motivation to perform well. As indicated above, at a successful unit the annual bonus based on unit profits can contribute very significantly to employees' total compensations. However, the BPD increases unit staff sizes when the units are earning enough money to support additional salaries. The addition of each new employee reduces the bonus available for the current employees since the same total bonus and welfare fund (20 percent of profits) is divided between a larger number of people.

Unit policies also did not appear to be designed with productivity and client needs in mind. For example, LKP policy required borrowers to visit the unit office at least three times to obtain a loan. A private BPR serving the same clientele in the same district which also made use of field staff required borrowers to visit the office only once. LKP customers can give savings to field staff, but must go to the unit to withdraw funds from their savings account.

Reasons for Evolution in Program Performance. The units are heavily influenced by the expertise and honesty of their management. For example, one unit was driven to the brink of insolvency through corrupt management practices. Units are also influenced by the natural endowments (in terms of income, population density, and infrastructure) of their sub-districts. Further, as indicated above, the units are owned by the NTB provincial government and controlled by the provincial development bank. It appears likely that both of these entities have objectives for the units beyond profitability, growth, and client service.

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comparing voluntary savings to loans net of required savings allows an analysis of the importance of voluntary savings in funding loans.

Response to Regulation No.71/1992 Supporting the 1992 Banking Law

The supporting Presidential Regulation for Indonesia's 1992 Banking Law does not permit informal financial institutions like LKPs to accept deposits unless they become BPRs or cooperatives. Informal financial institutions in existence before 1992 can become BPRs without meeting the minimum capital requirement that institutions created after 1992 must obtain. All four of the Dompu LKP units were established before 1992. However, Dompu's BPD planned to convert only two of the four units into BPRs. For the other two, they plan to comply with the letter of the law by nominally declaring the units to be cooperatives and redefining voluntary savings as "required members' savings." They plan to open new LKP units also nominally declared cooperatives in the two sub-districts that currently do not have these facilities

Competition

LKPs report virtually no competition for borrowers. Few LKP customers could qualify for BRI loans. There are virtually no BPRs in the area, and the PHBK program operates on too small a scale to erode their customer base. Like BKKs, LKPs report that cooperative leaders use their position in the cooperative system to function as private moneylenders charging a 20 percent flat monthly interest rate (equivalent to 1,600 percent per year on a declining balance basis). This rate is well above the LKP rate of about 160 percent. Thus, these individuals do not compete with the LKP units.

Units do compete with Unit Desas for deposits. LKP units pay an interest rate on deposits similar to the rate paid by the Unit Desas. LKPs can be more convenient than Unit Desas in that field staff visit villages on a regular basis and accept deposits. Nevertheless, the recent decline in the volume of outstanding savings indicates that the units are having trouble mobilizing funds in this way.

ANNEX 3: PROGRAM HUBUNGAN BANK DAN KSM (PHBK) PROGRAM

Program Description

Program Hubungan Bank dan KSM (PHBK) is a group lending program sponsored by the Central Bank of Indonesia (BI) and the German government's Agency for Technical Cooperation (GTZ). The program has been in existence since 1989. It currently operates in Bali, Java, North Sumatra, Lombok, South Sulawesi, and Nusa Tenggara Barat (NTB). Operations will shortly begin in Irian Jaya, North Sulawesi, and South Kalimantan. In each province, the program is managed from BI's branch offices. The program provides technical assistance to banks, NGOs, and borrower groups to help them develop group lending skills. Banks and NGOs lend to borrower groups. Since 1992, the program has provided no liquidity support for these loans.

Lending Models. The program operates along three basic models. In the first model, borrower groups function as financial intermediaries (KSP). Banks provide them with a group loan that they on-lend to their members. NGOs train groups in record-keeping and financial intermediation skills and provide general support to the group for a period of up to 9 months. The PHBK program pays the NGOs for their training and guidance activities. The program also trains (but does not compensate) the banks.

Model 2 functions similarly to model 1 with the exception that banks lend to NGOs which then lend to groups acting as financial intermediaries. Thus, NGOs act as financial intermediaries, and also train groups.

In Model 3, the bank lends to a channeling group (KPM). Each individual within the group receives a portion of each loan made. In practice, loans are almost always divided equally among group members. Each member is responsible for repaying his or her share of the loan. If a member does not repay, then the remaining members are liable for the unpaid segment of the loan. Banks generally recruit groups to participate in these loans in one of two ways. Banks encourage good customers who have some status in their market segment or community to form their own groups. Also, banks identify groups by working with formal or informal village or religious leaders. Generally, each group has a well-respected leader who is known to the bank prior to the issuance of the group credit. This leader may also provide collateral for the credit. The bank or members may pay the group leader a commission, or the leader may undertake the task without remuneration. Individuals are often willing to assume this responsibility without monetary compensation because of the status they receive from performing the role. Under this model, the program trains only the banks. It is up to the banks to organize and train groups.

This model is much cheaper for the program to support than the other two. Further, because the training investment is made in banks rather than in groups, and banks have a lower dropout rate than groups, it is less likely that resources will be wasted. However, this model can have higher costs for banks than the other two. NGOs are not involved in this model.

In practice, many banks, NGOs, and borrower groups are engaged in lending activities that combine various aspects of the three models. For example, some banks use NGOs almost as financial intermediaries (along the lines of Model 2), and pay them a fee for their services. However, they do not require the NGOs to assume credit risk. Some borrowers band together in a channeling group that divides all loans evenly among members (along the lines of Model 3), but charge members a spread that is retained by the group, and that may later be used to make additional loans to members (thereby simulating aspects of Model 1).

Evolution of Lending Models. PHBK now discourages banks from lending to NGOs with the purpose of their serving as financial intermediaries (Model 2) as this was found to be difficult to implement in practice. Under this mode, defaults were high as few NGOs had the capability to function as viable financial intermediaries.

In provinces that have attained a relatively high concentration of banking facilities, PHBK is also phasing out, or has phased out, support for groups as financial intermediaries (KSPs in Model 1). The program has found Model 1 expensive to implement and slow to expand because the role of the group as financial intermediary requires very significant training and support. Furthermore, Model 1 is only necessary when low population density creates high transaction costs for borrowers and banks. Thus, in areas like Java and Bali that have achieved significant coverage by financial intermediaries, the project now focuses exclusively on promoting Model 3 - direct links between banks and channeling groups of borrowers.

However, the program continues to support NGOs and groups as financial intermediaries (Models 1 and 2) in provinces such as NTB, North Sulawesi and South Kalimantan, where, program managers believe, the low density of financial intermediaries makes it impossible for the direct bank/borrower links under Model 3 to reach most rural inhabitants.

Participating Banks. As of March, 1996, 323 banks and bank branches were participating in PHBK. This figure increased from 148 in 1995. Participating banks include private rural banks or *Bank Perkreditan Rakyat* (BPRs); provincial development banks (BPDs); public and private commercial banks; and provincial and village-owned financial facilities (LDKPs and BKDs). However, different types of banks participate with varying degrees of enthusiasm. BPRs currently account for 56 percent of participating banks; state-owned commercial banks, 23 percent; private commercial banks, 11 percent; and regional development banks, 10 percent. Program managers have found that BPRs are the most eager to participate. The number of BPRs involved in the program has more than tripled in the last 18 months since PHBK began targeting marketing efforts to them. The program has been least successful in attracting private commercial banks. Five private commercial banks have signed Memorandums of Understanding to participate in PHBK, and two additional banks are preparing to. However, only two of these banks are actually making PHBK loans and even they are doing so on only a very modest basis. Furthermore, they are lending to NGOs for these to on-lend to groups (Model 2), a model that the program no longer supports due to NGOs' poor performance as financial intermediaries.

Program Supervision. Banks and NGOs are supervised by Bank of Indonesia staff and consultants. Groups that function as financial intermediaries are supervised by NGOs; and groups

that simply channel credits to members are supervised by banks. This supervision is very expensive for the more complicated lending models and in remote areas.

Loan Products

Banks, NGOs, and credit groups are free to choose the terms under which they will make loans. Loan products vary from one BPR which made loans for 10 weeks with daily repayments, to other banks making 12 month loans with monthly repayments. The PHBK program encourages financial intermediaries to require a 20 percent forced savings deposit in lieu of collateral. In practice, individual banks differ in the extent to which they require this forced savings component.

Given that the three types of lending intermediaries set their own loan terms, interest rates vary widely across participating institutions. In general, the larger the number of financial intermediaries between the originating institution and the end user, the higher the interest rate paid by the end user. Thus Model 3 (in which loans pass from banks to "channeling groups") usually has the lowest rates to the end user, and Model 2 (in which loans pass from banks, to NGOs, to borrower group financial intermediaries, to end users) has the highest. Rates also tend to be higher in more remote areas and for loans with daily repayments. In Sumbawa, most banks were lending at a 2.5 to 3.0 percent flat rate per month; NGOs that on-lent to groups were lending at a 5.0 to 5.5 percent flat rate per month; and credit groups were lending to members at a flat rate of 5.5 to 7.5 percent per month (including a 1.5 percent flat rate required savings component). On a declining balance basis, and including fees and forced savings requirements, rates generally ranged from about 3 to 15 percent per month or 100 to 450 percent per year for end users. However in less remote locations, banks lending to channeling groups may charge rates as low as 1.9 percent per month on a declining balance basis. This rate, including fees and forced savings requirements, can translate into interest rates as low as about 46 percent per year for end users.

Savings Products

All participating banks offer groups the opportunity to hold voluntary saving accounts. The interest rate paid on these accounts varies by bank. In Sumbawa, private rural banks (BPRs) were paying an interest rate of 12 to 16 percent per year on demand deposit accounts. These rates are positive in real terms, although generally below the level paid by BPRs in more competitive markets. They are somewhat higher than the rates paid by the other programs reviewed in this report and than those paid under BRI's SIMPEDES program. Forced savings accounts paid the same interest rate as voluntary accounts. The interest rate charged on time deposits range from 16 to 22 percent per year for a 1 year deposit. Bankers believed that for these small depositors, convenient access to savings was far more important than earning a high interest rate. They therefore did not think that raising the interest rate paid on deposits would increase the volume of savings they could mobilize.

Generally, NGOs functioning as financial intermediaries and credit groups (KSPs) also accept voluntary savings deposits. These funds may be recycled in the form of loans to groups or members, or they may simply be deposited on the saver's behalf with a bank.

Staffing

Staffing for the PHBK program is heavy and includes Bank of Indonesia (BI) employees and consultants at the national level and in BI's branch offices. Further, the work of training credit groups is contracted out to NGOs. Staffing costs are primarily responsible for the high total program costs discussed below.

Staffing of BPRs is also very heavy compared to staffing of the province-owned financial institutions (BKKs and LKPs) reviewed in this report, and compared to Bank Rakyat Indonesia (BRI's) Unit Desas. One BPR interviewed reported a staff of 23. This compares to staffs of 3 to 11 for BKKs, LKPs, and Unit Desas. However, BPRs tend to have larger lending programs than BKKs and LKPs. This BPR made 2,000 loans in 1995. An average BKK in South Kalimantan made 314 loans in the same year; and the average LKP made about 1,000.

This review did not systematically collect salary information for either PHBK workers or BPR staff. However, one BPR manager reported paying credit agents/field staff a base salary of Rp. 95,000 per month (US$41), and a bonus of 15 percent of the interest he or she collected. The BPR manager stated that a good credit agent could make as much as Rp. 250,000 (US$107) per month including this bonus. This base salary is extremely low when compared to base salaries of BKK and LKP workers. Further, if the field worker earned one-half of this theoretical maximum bonus, then his total compensation would still rank at the bottom of the compensation scale for BKK units. However, this compensation would be roughly in line with that received by LKP employees. While bonuses represent an important part of total compensation for BKK and LKP workers, they were unlikely to account for more than 50 percent of total income for these employees. In contrast, bonus pay could be equal to well over 100 percent of a credit agent's base pay at this BPR.

Underwriting and Loan Servicing

Underwriting and loan servicing techniques are left to the discretion of individual banks, NGOs, and credit groups. Furthermore, they depend on the type of lending model employed.

Model 1. When banks lend to savings groups and rely on an NGO to train and support the groups (Model 1), banks generally also depend on the NGO to assist in underwriting and loan servicing. In this model, NGOs identify and screen groups. The banks retain the credit risk however, and so bank staff generally undertake their own appraisal. Banks review the repayment history the group has experienced in lending out its own funds. Banks usually also require that groups submit the names of all group members who may receive part of the loan and a description of their businesses. Banks may select businesses from the list, and visit them on a random basis. Banks also generally start groups off with small, short-term loans, and allow these loans to grow in size and repayment term as groups demonstrate repayment capacity. In theory, groups should also demonstrate savings capacity by saving a fixed amount each month for a period of several months prior to receiving their first loans. In practice however, many groups collect the total required savings amount from members at one time and deposit these funds in a lump sum in the bank.

In Sumbawa, where the lending bank was located an hour or more away by car from the credit groups, the bank relied on an NGO to collect payments from groups. The bank paid the NGO

0.25 percent of the initial loan balance per month for performing this collections function. However, the NGO was not happy with this arrangement and maintained that the fee was insufficient to cover its costs. One BPR also allowed borrowers to make repayments to the local BRI Unit Desa outlet. The Unit Desa then transferred these payments to the bank.

In theory, credit groups also appraise loan requests from their members. This probably occurs in mature groups functioning like real credit institutions. The groups visited however were located in Sumbawa, where implementation of the program is still relatively new. Groups on this island did not receive a loan from a bank and then review loan applications from members to determine how funds would be disbursed, rather they simply divided the loan evenly among all members.

Given the amount of time it takes to train groups and fulfill program requirements, groups first enrolling in the program can wait six months or more to obtain their first loan. This contrasts with several days or weeks for BKK and LKP borrowers, but is similar to the wait required under the P4K program.

Model 2. In Model 2, banks make loans to NGOs that make loans to groups, that make loans or pass funds to their members. Under this model, NGOs assume the full credit risk for the loans they make to groups. In theory of course, banks should be concerned about the credit-worthiness of the end-users of the loans, since their repayment record will largely determine whether the NGO will be able to repay the loan to the bank. In practice in Model 2, banks do not concern themselves much with the creditworthiness of end-users. NGOs undertake many of the credit review practices banks engage in in Model 1. However, NGOs also generally know the groups they work with quite well, and so may not be as structured in their formal credit analysis.

Model 2, like model 1, requires a significant level of sophistication on the part of the credit group. Furthermore, forming links between groups, NGOs and banks can be very time-consuming. Thus, groups first enrolling in the program under Model 2 can also wait six months or more to obtain their first loan.

Model 3. In Model 3, once a group has been assembled, underwriting proceeds as described under Model 1 above.

Under Model 3, the group leader assumes responsibility for collecting the payments of group members. Banks then collect payments from group leaders. One BPR reported that they had invested significant resources in training channeling groups in bookkeeping, management, and other business skills. However, another BPR said that they provided no training support to channeling groups. BPRs also differ in the extent to which they require forced savings as collateral from channeling groups. As in Models 1 and 2, lenders usually start groups off with small, short-term loans and increase their size and term over time as groups demonstrate repayment capacity.

Requirements for channeling groups under this model are much less than the requirements for credit groups under Models 1 and 2. Further, individuals are linked more closely to banks under

this model than the other two. Thus, the time from group formation to first loan disbursal can be as little as a few days to a few weeks.

Program Performance

This section reviews program performance as measured by sustainability and outreach. Sustainability is measured by the program's arrears rate, its cost per unit outputs, and the size of the subsidy required to sustain operations. Outreach is measured by the volume of annual lending and savings activities (scope) and the population it serves (depth of market penetration).

Sustainability. PHBK experienced early problems with high arrears. However, recent repayment performance has been sound. Information on the share of the PHBK portfolio at risk was not available. However, the program's ratio of number of credits overdue to number of credits outstanding[41] climbed sharply over the two years from fiscal 1990/91 (April 1990 to March 1991) to fiscal 1992/93. By the end of fiscal 1992/93, loans in arrears accounted for 29 percent of outstanding loans. This figure has since declined, and stood at 13 percent in 1995/96 (Table 21).[42] The volume of late payments as a share of the volume of outstanding loans rose from fiscal 1990/91 to 1993/94 and then declined. This rate was 5.7 percent in fiscal 1995/96. Data do not allow for a calculation of the program's annual default rate. However, program organizers report the cumulative default rate as being below 2.8 percent.[43] Further, their figures show this rate declining slightly over the last two years. The program's arrears rate and default rate would likely be judged sound by international microcredit standards.[44]

Table 21
Arrears Rates for PHBK Program

	Fiscal Year					
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
Number of credits overdue percent of number of credits outstanding	17.2	21.1	29.0	19.9	11.5	12.9
Volume of payments overdue percent of volume of loans outstanding[a]	5.0	14.2	13.3	16.5	8.7	5.7

a/ Overdue payment is defined as a payment that is one day late or more.

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[41] Where credits overdue is defined as credits whose payments are one day late or more.

[42] Actual annual arrears rates may be below the figures presented here because many participating banks do not write off loans. Thus, current annual arrears rates reflect some bad debts incurred in previous years.

[43] In the absence of data on default rates, the maximum possible cumulative default rate is assumed to be the inverse of the cumulative repayment rate. In fact, the cumulative default rate will be below this figure since at least some of the loans for which repayments are currently late will eventually be repaid. The cumulative repayment rate is defined as: total cumulative repayments / (cumulative repayments + cumulative arrears).

[44] For example, the Committee of Donor Agencies for Small Enterprise Development (1995) set as an acceptable standard for microenterprise lending, that 10 percent or less of total loans should have late payments of 30 days or more, and lenders should have annual losses from defaults of 4 percent or less of outstanding loan volume. PHBK's arrears rate is slightly above the 10 percent level but includes loans in arrears by one day or more. The program's default rate is likely below 4 percent.

PHBK program costs are high. Further, according to data provided by Bank of Indonesia, 70 percent of total costs are, BI's "in-kind" costs (salary and allowance expenses of regular BI staff working on the project and rent for project office space).[45] It is therefore useful to examine program cost ratios considering total costs and "cash outlay" expenses only (all costs incurred by GTZ and BI that are in excess of regular BI staff salaries and rent for office space in BI buildings).

Even when only cash outlay costs are considered, the ratio of annual program costs to annual lending is high in 1995/96, but has declined rapidly in the last two years. In fiscal 1992/93, the program's ratio of total costs to funds lent was approximately 304 percent (or 86 percent if BI's in-kind costs are excluded from the calculation). This figure declined to approximately 94 percent by 1995/96 (or 28 percent if BI's in-kind costs are excluded). The cost per group receiving a loan was about US$11,654 in 1992/93, (US$3,304 excluding in-kind costs) and had declined to US$1,764 (US$522 excluding in-kind costs) in 1995/96. Finally, if it is assumed that most program expenses are incurred for groups receiving their first loan, it is useful to compare annual program costs to the number of first loans received per year. The program spent an estimated US$16,856 per first loan received (US$4,729 excluding in-kind costs) in 1992/93, and about US$2,079 per first loan (US$615 excluding in-kind costs) in 1995/96 (Table 22).

[45] Program costs considered here include all costs that Bank of Indonesia and donors attribute to the program. These costs do not include the costs that banks incur in making program related loans. Banks' costs are excluded because information regarding these costs was not available. Further, it is assumed that banks are fully compensated for the costs they incur through the revenues they earn on program loans. Because banks receive no special incentive to participate in the program, it is unlikely that they would continue to do so if they were not recouping their full costs. Similarly, NGOs' costs are not included in this section because NGOs are compensated by the program for their services. Thus, their costs should already be captured in expenditures by BI and donors.

Table 22
Approximate PHBK Program Costs in Comparison to Program Outputs: Fiscal 1990/91 to Fiscal 1995/96

Total Cost Per Program Output						
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
Annual cost (US$)	3,687,167	3,994,965	4,253,810	4,647,182	5,164,454	5,231,503
Cost percent of annual loan volume	357	227	304	292	168	95
Cost per group credit (US$)	8,821	7,412	11,654	6,012	3,699	1,785
Cost per new group credit	14,574	16,856	16,682	10,169	6,134	2,103
Cash Outlay Cost Per Program Output (US$)[a]						
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
Annual cash cost (US$)	954,434	1,124,984	1,205,954	1,379,258	1,697,107	1,589,218
Cost percent of annual loan volume	92	64	86	87	55	29
Cost per group credit (US$)	2,283	2,087	3,304	1,784	1,216	542
Cost per new group credit (US$)	3,772	4,747	4,729	3,018	2,016	639

a/ Costs exclude BI in-kind expenditures on the program.

The costs detailed above effectively translate into very large subsidies for borrowers. To gauge the magnitude of this subsidy, this section provides rough estimates of the percent increase in the interest rate that banks would have to charge their PHBK clients if the banks were to maintain their current level of profits while fully funding this program. This percent increase in the required interest rate is a lower-bound estimate of the Subsidy Dependency Index (SDI).[46] As Table 23 indicates, the program's subsidy dependency index follows trends in program costs. In fiscal 1990/91, banks would have had to increase their interest rate by approximately 628 percent to pay for the full cost of the program. Over the following 5 years, this figure declined sharply, and stood at 158 percent in fiscal 1995/96. While a 158 percent increase in the interest rate is still very high, it is impressive that this figure declined by almost one-half from fiscal 1994/95 to 1995/96 alone. To fund direct program costs, banks would have had to increase their interest rate

[46] SDI figures presented here are only rough estimates of actual figures because the author was required to make a number of significant estimations and assumptions. Because this program operates through private banks, we assume that the total program subsidy is equal to the cost of running the PHBK program, that is, that banks are not subsidizing these loans in other ways. The SDI calculation also requires an estimate of the total interest collected annually on program loans. This information is not available. An estimate for this figure was calculated based on the average interest rate charged on loans, the program's annual average outstanding loan volume, and the program's annual arrears rate. The average interest rate charged on loans is assumed to be 107 percent per year on a declining balance basis including all interest charges, fees, and forced savings requirements.

Further, the SDI is calculated assuming a market return for equity holders. Since information on participating banks' current returns to equity holders was not available, we assume here that these rates are acceptable at their current level. If banks' actual returns on their loans under this program are below the market level, then the figures presented here underestimate the actual SDI.

See Annex 7 for a description of how the SDI is calculated.

by 163 percent in fiscal 1990/91, and by 48 percent in 1995/96. Table 23 also provides rough estimates of the interest rate banks would have had to charge clients to maintain their current level of profitability and cover program costs. In fiscal 1990/91, banks would have had to charge an annual interest rate of approximately 781 percent. By fiscal 1995/96, this figure had declined to 277 percent. To fund the direct costs of the program and maintain profitability in fiscal 1995/96, banks would have had to charge an interest rate estimated at 159 percent.

Table 23
Estimate of Subsidy Dependency Index[a] and
Required Interest Rates to Cover Program Costs for PHBK Program

	Fiscal Year					
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
Lower bound estimate for SDI with full program costs (percent)	628	515	574	471	298	158
Lower bound estimate for SDI with direct costs only (percent)	163	145	163	140	98	48
Lower bound estimated average current interest rate (percent) [b]	107	107	107	107	107	107
Estimated average interest rate required to fund full program cost (percent)	781	659	723	613	427	277
Estimated average interest rate required to fund direct program cost (percent)	282	263	282	257	212	159

a/ The percent increase in the interest rate that is required if the program were to operate without subsidies.
b/ Annual average interest rate calculated on declining balance basis including all fees and forced savings requirements. An estimated average of the rates commonly charged by rural banks and commercial banks to channeling groups.

Outreach Scope.
PHBK experienced significant difficulties from fiscal 1991/92 to fiscal 1993/94. Since 1994 however, the program has grown rapidly. In real terms, PHBK volume declined by 24 percent in fiscal 1992/93, and then grew by 7 percent in fiscal 1993/94; 84 percent in 1994/95; and an estimated 73 percent in 1995/96 (Table 24). Total loan volume was Rp. 12.8 billion (US$5.5 million) in fiscal

Table 24
PHBK Program Lending Volume

	Fiscal Year				
	1991/92	1992/93	1993/94	1994/95	1995/96
Nominal loan volume (Rp. million)	3,534	2,915	3,406	6,813	12,821
Growth in real loan volume (percent)	64	-24	7	84	73
Nominal loan volume (US$)	1,757,384	1,399,328	1,593,589	3,075,107	5,526,422
Number of group loans issued	539	365	773	1,396	2,931
Growth in number of group loans issued	29	-32	112	81	110

1995/96. This represents approximately Rp. 40 million (US$17,000) per participating bank branch. PHBK disbursements in fiscal 1995/96 were approximately 55 percent as large as the P4K program's. Nevertheless, PHBK has expanded very rapidly over the last several years, whereas P4K's lending declined in 1995/96.

PHBK management does not keep track of the volume of voluntary savings generated under this program. The real volume of required savings deposits grew by 79 percent in 1994 and 51 percent in 1995. By the end of fiscal 1995/96, required savings stood at Rp. 2.1 billion (about US$900,000), and equaled 19 percent of outstanding loans (Table 25).

Table 25
PHBK Required Savings

	Fiscal Year			
	1992/93	1993/94	1994/95	1995/96
Nominal outstanding savings (Rp. million)	424	651	1,263	2,077
Real growth in savings (percent)	NA	41	79	51
Nominal outstanding savings (US$)	203,313	304,399	570,165	895,345
Savings percent of outstanding loans	20	24	24	19

Outreach Depth. This program's objective is to deepen rural financial markets. The program defines its target group as households that have not previously received a commercial bank credit. According to the program's 1993 Impact Study carried out in Yogyakarta and Central Java, 93 percent of beneficiaries in those provinces met this criteria.

Although the program does not target a specific income group, it is nevertheless interesting to obtain some indication of the income of program beneficiaries. The program's monitoring system does not track beneficiaries' incomes. The 1993 Impact Study found that among surveyed participants in two provinces, less than 20 percent had monthly household expenditures below the poverty line. More than 40 percent of respondents had household expenditures more than twice as high as the poverty line. Furthermore, about 11 percent of households were in the highest 13 percent of the income distribution. If these findings are representative of borrowers under the program today, then this program cannot be considered to be primarily reaching the low-income population, although some low-income households are being served. It is likely that virtually all of P4K's loan recipients have incomes as low or lower than the poorest one-third of PHBK participants.

The program does not keep track of the number of borrowers per group, and estimates for this figure are based on old data that no longer accurately reflect the makeup of participating groups. Thus, it is difficult to estimate the average loan size per individual borrower. One program manager's estimate of the average loan size per group member results in loans per person equal to 13 percent of GDP per capita. However, management estimates of the number of members in each borrower group results in loans per individual being equal to about 7 percent of per capital GDP. If the program's actual average loan size to end users is in the middle to higher end of this range, then this program has the largest average loan size of the 5 programs reviewed here. Nevertheless, this figure is much lower than the loan size-to-GDP-per capita figure for 9 of the most respected microcredit programs in the world (Christen et al., 1995).

The program does not keep track of the number of beneficiaries who are women. One program impact survey found that approximately 50 percent of surveyed borrowers were women. The program attracts many women because loans with relatively short terms, frequent repayments, and high interest rates are most appropriate for petty traders. In Indonesia, women make up a large share of the people engaged in this occupation.

For banks participating in this program, geographic outreach varies significantly. Some banks engage only in lending to channeling groups (Model 3), and service clients who are no more than 6 kilometers from one of their branches. Other banks serve groups much further away by relying on the more indirect lending to credit groups (Model 1), or to NGOs that onlend to credit groups (Model 2). As indicated above, one BPR was using Model 2 to serve clients located one hour or more away from the bank by car.

Productivity. The PHBK program has very high overhead costs, as reflected in its high unit costs and subsidy dependency index. PHBK's national-level staff is large and spends a very significant amount of time and money supporting regional initiatives. Similarly, regional staff spend a large amount of time working with NGOs and banks. However, the program is rapidly becoming more cost effective as it is increasingly able to benefit from economies of scale, and as the shift to the relatively simple model of banks' lending to channeling groups (Model 3) reduces ongoing support requirements.

Reasons for Evolution in Program Performance. Program managers attribute PHBK's troubled start and improved performance to financial sector and program-specific circumstances. The program experienced particular difficulties in 1991/92 and 1992/93. This was a troubled period for the entire Indonesian financial sector, which experienced significant liquidity problems and escalating arrears rates. Program volume was also adversely affected and took some time to recover after the program stopped providing subsidized liquidity credits to participating banks in 1992.

Program managers attribute initial, high program costs and arrears rates to inadequate screening of participating NGOs and groups, and to high reliance on the program's Model 2. Model 2 provides financing to credit users through banks making loans to NGOs that lend to credit groups that lend to members. Alternative program models are simpler and more direct with banks lending directly to credit groups which lend to members (Model 1), or banks lending directly to end-users loosely organized as a channeling group (Model 3). Model 2 was found to require the most intense program support and to have the highest program costs. It also suffers from the highest arrears problems because many NGOs are poorly motivated and trained to make market-based loans. For the last several years, the program has been phasing out this model wherever possible, and its share of total program volume has declined from 60 percent in 1993/94 to 17 percent in 1995/96. However, as indicated above, this Model is sometimes the only way that the program can function in remote areas. The program must screen NGOs carefully to ascertain that they have the commitment to follow sound banking practices. Further, it must provide them with training that will enable them to perform these functions effectively.

Program managers anticipate that PHBK will continue to improve its productivity as the program redirects its technical assistance in high density areas from Model 1 (lending to credit groups) to Model 3 (lending to end users loosely organized as a channeling group). As discussed above, Model 3 is the most cost effective of the three models, and the easiest and quickest to propagate. While the program will continue to support the slower and more expensive Models 1 and 2 in more remote regions, organizers anticipate that the ever increasing volume of loans undertaken under Model 3 will rapidly drive down unit costs.

Also, program volume has increased in recent years partially due to the program's aggressive marketing to rural banks (BPRs). BPRs are small, local banks that are usually privately owned and have few, if any, branches. They are much closer to PHBK's target market than many of the larger commercial banks. Also, they have little, if any, bureaucracy and therefore possess the flexibility to adopt the PHBK group lending approach quickly.

Finally, this program is still expanding its geographic coverage. Thus, a significant share of the program's subsidy can be attributed to start up costs in new regions and to reach new groups. Once the program has ceased to expand geographically and has slowed its coverage of new groups within regions, it is likely that its required subsidy level will decline still further.

Response to Regulation No.71/1992 Supporting the 1992 Banking Law

Because the PHBK program relies primarily on BPRs, provincial banks, and commercial banks, it has not been impacted significantly by the Presidential Regulation supporting the 1992 Banking Law. The Regulation discouraged the program from an early goal of upgrading credit groups to semi-formal financial institutions. However, this idea would almost surely have been abandoned even if the Regulation had not been promulgated. The upgrading process was extremely difficult and costly, and the results were poor.

Competition

PHBK, like P4K, complains of "unfair" competition from the new and highly-subsidized TAKESRA/KUKESRA group-based lending program for poor families. PHBK also mentions the P4K program as a source of competition since P4K provides loans to groups at approximately one-fifth of the effective rate charged by banks in the PHBK program.

ANNEX 4: PEMBINAAN PENINGKATAN PENDAPATAN PETANI-NELAYAN KECIL (P4K)

Program Description

Pembinaan Peningkatan Pendapatan Petani-nelayan Kecil (P4K) is a group-based microenterprise promotion and lending program targeting the rural poor. It is jointly implemented by the Ministry of Agriculture and BRI. The program receives significant financial and management support from the International Fund for Agricultural Development (IFAD), the United Nations Development Program (UNDP), and the Dutch government. The Asian Development Bank (ADB) is also considering supporting the project. Directly the program focuses on building microenterprise skills, providing credit, and promoting savings. In addition, the program attempts to link borrower groups with community activities and social service agencies. The program operates throughout Java, Bali, and Lombok. It has expanded on a pilot basis to 12 additional provinces.

Currently, 80 percent of the funds BRI lends under the project are provided to it in the form of a loan from IFAD. BRI supplies 20 percent of loan funds. BRI plans to provide 100 percent of loan funds for the expansion into 10 of the 12 provinces in which the program is currently being piloted. Loan funds for the remaining two pilot provinces will come from the 5 percent of profits that state owned enterprises are required to allocate to poverty reduction programs.

Mechanics. Ministry of Agriculture extension agents are the principle implementers of the program. They identify communities with the potential to participate in the program based on the community's income level and opportunity for microenterprise development. The agent, in conjunction with the community, identifies promising areas for small business development. Within the targeted communities, the agent identifies poor households interested in participating in the program. Only households with annual per capita incomes below the monetary equivalent of the price of 320 kilograms of rice (approximately Rp. 320,000 or US$138 in today's prices) are accepted. Household income is determined via a detailed questionnaire that extension agents fill out based on information supplied by the household.

Households that qualify for participation are encouraged to form groups of 8 to 16 families. The average group size is 10.8 households. To receive its first loan, a group must save a minimum of Rp. 50,000 (US$22). In addition, they must participate in two training sessions provided by their agriculture extension agent. During the second session, the agriculture extension agent helps the group complete their business plan. This business plan is approved by the district office of the Ministry of Agriculture and is then sent to the appropriate BRI branch. The BRI branch must also approve the business plan. In theory BRI's approval process includes a field visit to the group, although it appears that this does not always occur. Thus, the group may receive it's loan without having had a previous contact with a bank agent. The loan is frequently disbursed in the village itself.

The average length of time from the time a household completes its qualifying questionnaire until it obtains its loan is six months. This compares to a two-week or less wait for BKK, LKP, and BKD borrowers. First time borrowers under the PHBK program receive their loans from a few days to more than six months after forming as a group, depending on the organization of the group, the supply of loans, and the type of lending model used.

P4K loans are made only through BRI branches, not through BRI's Unit Desa network. Groups must make their last payment directly to a BRI branch. All other payments can be made at a BRI branch, a village post, a mobile service unit, or a Unit Desa.

Each group receives one loan which is divided among group members as they choose - usually evenly. The group assumes joint liability for repayment of the loan.

In theory, agriculture extension agents provide follow-up support to groups including organizing an additional training course in implementation of the business plan, and providing guidance in areas such as bookkeeping, finance, and marketing. The extension agents are also charged with encouraging groups to save and repay their loans, and to link with other social services. In practice, the degree to which extension agents perform these follow-up activities probably differs considerably across program sites and individual workers.

Incentives for Ministry of Agriculture Workers. Agriculture extension workers receive a number of incentives to identify groups and assist them in obtaining credits. Extension workers participating in the program receive a travel allowance of US$5 per month. In addition, they receive US$5 per group for conducting the first course that groups must participate in, and US$15 per group for conducting the second course. Groups can receive a loan after the their second course. The extension agents receive an additional US$10 per group for conducting a course on implementing business plans that groups take after they receive their first loan. Also, extension agents' promotions and salary increases are based on a point system. Extension agents receive one point for every group they form. Agents do not receive incentives for helping to ensure that groups repay their loans promptly or that they receive additional loans.

Program organizers would like to provide additional incentives to extension workers to encourage them to provide follow-up support to groups that have already received their first loan. Ideally, these incentives would take the form of payment for additional courses centering on helping the groups make optimal use of their loans. However, the program's target group is primarily households with little or no land who use the loans for off-farm business pursuits. Most agriculture extension agents are poorly positioned to provide advice concerning off-farm activities.

BRI recognizes the importance of providing extension workers with incentives to continue their commitment to participating groups. As discussed below, loan terms change for groups after their fourth loan. BRI uses some of the increase in the interest rate charged on these later loans to reward agriculture extension workers and their managers for groups' prompt repayments. Specifically, extension workers receive a fee equal to from 0.2 to 0.35 percent of the initial loan amount for each monthly payment promptly received. Extension managers receive a fee equal to

0.1 to 0.15 percent of the initial loan balance for each prompt repayment. This incentive system will be extended to all loans in new provinces.

Group Formalization and Upgrading. In the past, the program attempted to link groups into broader associations with the idea that these "super" groups could become financial intermediaries, as occurs in PHBK's credit group model (Model 1). However, generally only the more affluent groups and group members could take advantage of these more sophisticated structures and, in any case, the concept was generally not very successful. The program will not focus efforts on this area in the future.

Program Supervision. As indicated above, the program is split between group development which is controlled by the Ministry of Agriculture, and lending, which is controlled by BRI. Program managers receive data from BRI but appear to have virtually no influence over BRI's P4K policies and procedures. Within BRI, the program is overseen by the Small Business, Food, and Cooperative Division. Program managers exert somewhat greater influence over the Ministry of Agriculture's involvement with the program.

Loan Products

First Four Loans. Loan terms are usually from 12 to 18 months. Repayment frequency can be monthly, quarterly, semi-annually or annually, depending on the nature of the use of the loan.

Groups must save at least Rp. 50,000 (US$21) to obtain their first loan. Group savings for the second loan must be at least 10 percent of the loan capital required, and savings for the third and fourth loan must be at least equal to 20 percent of the loan required. After the fourth loan, the groups' forced savings requirement is 25 percent of the loan amount. Savings earn interest at the same rate as savings placed in BRI's voluntary savings account program - SIMPEDES. This rate is about 9 percent for small balances. Groups can withdraw their savings at any time after they have repaid their loan.

For the first four loans, the interest rate charged on loans is fixed at 1 percent per month on the initial loan amount. Assuming monthly installments, and taking into account the forced savings requirement, this is equivalent to a monthly interest rate of about 1.8 to 2.4 percent on a declining balance basis or 24 to 33 percent annually. The effective interest rate varies depending on the amount of forced savings required. A small incentive in the form of an interest rebate is provided for on-time payments. This rebate reduces the effective annual interest rate yield to about 22 to 31 percent. A stamp duty of Rp. 1,000 (about US$0.43) is charged on all credit agreements.

For a first loan, the maximum loan size per group member is Rp. 100,000 (US$43). This figure increases to Rp. 300,000 (US$128) for the fourth loan. The initial maximum loan is equal to about 5 percent of GDP per capita, and the final maximum, about 15 percent.

Additional Loans and Expanded Program. Less than 2 percent of groups organized under P4K have received more than four loans. However, for groups that do receive a fifth loan or more, the loan terms change. Specifically, the interest rate increases to 1.5 percent per month on the initial loan amount and the savings requirement increases to 25 percent of the loan amount. Taking into account the interest rate, the required savings, and the interest paid on required savings, these terms are equivalent to a 62 percent annual interest rate on a 12-month, declining balance loan with no forced savings component and monthly installments. From 0.3 to 0.5 percentage points of the interest rate is paid to Ministry of Agriculture extension workers and managers as an incentive for them to insure prompt repayment. It is likely that these same terms will apply to all loans in the 10 additional provinces into which the program is expanding.

Intra-group Loans. Many P4K groups collect voluntary savings from members and lend these funds out to other members. Each group determines the interest rate it will charge on these loans. Typically, groups lend out these funds at a 5 percent flat rate per month. This is equivalent to about a 154 percent annual rate on a declining balance basis.

Savings Products

P4K groups are encouraged to voluntarily save funds with BRI. In addition, individuals may deposit funds with their group to be on-lent to other group members. BRI pays groups an interest rate on savings equal to the amount it pays on its popular SIMPEDES savings accounts. This is currently about 9 percent. The interest rate paid on forced savings accounts is also 9 percent. This rate is approximately equal to inflation. Groups themselves determine what interest rate they will pay to members for funds that are on-lent to other group members. This rate varies by group but is considerably more than the rate paid by BRI.

Staffing

P4K is heavily staffed. The program has its own full-time staff. In addition, field workers and managers in the Ministry of Agriculture work on program-related activities as do BRI employees. The author did not collect detailed staffing or salary-related information for this program.

Underwriting and Loan Servicing

As indicated above, agriculture extension workers function as credit agents under this program. In theory, BRI conducts its own credit review of P4K loans, and borrowers are responsible for making payments to BRI. In practice, BRI relies heavily on the extension workers to screen and prepare groups, and the groups frequently rely on the extension workers to collect their payments and deliver them to BRI. This use of extension workers lowers transaction costs for BRI and borrowers, but it entails a cost for the Ministry of Agriculture. This practice can create problems with repayment and limit groups' access to additional credits, as discussed in greater detail below.

Program Performance

This section reviews program performance as measured by sustainability and outreach. Sustainability is measured by the program's arrears rate, its cost to output ratios, and the size of the subsidy required to sustain operations. Outreach is measured by the volume of annual lending and savings activities (scope) and the population it serves (depth of market penetration).

Sustainability. Information on the total volume of loans in arrears was not available. This analysis attempts to estimate these figures by providing information on the number of groups with loans in arrears as a percent of the number of groups with outstanding loans. Groups with arrears remained a small percent of groups with credits through 1993. However, groups with arrears increased to 10.5 percent of groups with credits in 1994, and 18.7 percent in 1995. However, the above figures will overstate actual arrears rates because BRI does not write off loans in default. Payments in arrears were equal to about 7.4 percent of outstanding credits at the end of 1995. Figures for the first two months of 1996 indicate that arrears were likely be significantly higher that year. Disturbingly, arrears have increased every year since 1992, when groups with arrears accounted for 4.7 percent of total groups and payments in arrears were equal to 1.4 percent of outstanding credits (Table 26). The 1995 payment arrears rate is only slightly higher than that of PHBK. However, PHBK's rate (which also includes loans that are actually in default) has declined every year since fiscal 1993/94. Project data indicate that P4K's cumulative default rate since inception is probably about equal to that of PHBK-approximately 2.5 percent.

Table 26
P4K Arrears Rates

	Calendar Year				
	1991	1992	1993	1994	1995
Number of groups with arrears percent of groups with outstanding loans[a]	5.1	4.7	6.2	10.5	18.7
Volume of payments overdue percent of volume of loans outstanding[a]	1.4	1.4	1.6	2.8	7.4

a/ Because BRI does not write off P4K loans, these figures will overestimate actual arrears.

P4K's rising arrears rate is of considerable concern to program managers who are looking at ways of addressing the issue. This issue also appears to have contributed to a delay in plans to expand the program to full-scale in 10 provinces currently participating in a pilot.

P4K is an ambitious program that provides a variety of services to borrower groups in addition to those that relate specifically to financial services. For this report, program expenditures have been allocated between financial services and all other activities. Financial services account for about 69 percent of total program costs.[47] The cost figures presented below are estimates of costs for financial services only. They include costs associated with program management, and with the Ministry of Agriculture's involvement in the project. They also include the implicit cost of the subsidy embodied in the low-interest loan IFAD provided to BRI. To facilitate comparison with the PHBK program, they do not include BRI's direct costs of undertaking P4K lending activities.

[47] Financial services costs were estimated based on program organizers' estimates of the amount of time that management and field staff spent on a variety of tasks. Spending on general program-related overhead that could not be directly allocated was divided between financial services and non-financial services in the same proportion as these activities' shares of total non-overhead expenditures. Specifically, financial services accounted for about 69 percent of non-overhead expenses. Thus, these activities were allocated 69 percent of total overhead costs.

However, these costs will be taken into account when calculating the Subsidy Dependency Index discussed below.

The P4K program achieved very impressive declines in cost per funds lent from 1991 to 1993 (Table 27). In 1991, total program costs were equal to 176 percent of funds lent. Only 2 years later in 1993, total program costs were equal to 18 percent of funds lent (or 9 percent if the Ministry of Agriculture's in-kind costs of salaries for extension workers are excluded from the calculation). In 1993 the program's total spending was about US$105 per group receiving a loan (or about US$10 per individual). Given the program's tight targeting of the very poor (see below), these figures are impressive. In recent years, program cost effectiveness has declined, but remains strong. In 1995, total program costs were equal to 30 percent of funds lent (or 23 percent if the Ministry of Agriculture's in-kind costs are excluded), and the program was spending about US$213 per group receiving a loan (about US$20 per individual).

Thus, in 1995, P4K was more cost effective than PHBK (as measured by total program cost per volume of funds lent, and total and cash-only costs per group receiving credit). One reason that P4K is able to operate at a lower cost than PHBK is that extension agents earn lower salaries than Bank of Indonesia staff. Also, because P4K has an annual volume almost double that of PHBK, it is able to take fuller advantage of economies of scale. Finally, P4K's simpler structure may contribute to lower costs.

However, P4K's cost effectiveness ratios have deteriorated over the last two years, whereas PHBK's have improved. This shift is probably driven by PHBK's rapid expansion, and P4K's much slower growth. In addition, P4K managers attribute their recent productivity decline to the shift in P4K responsibility within the Ministry of Agriculture, which necessitated a great deal of additional training, and to the program's expansion on a pilot basis to 12 additional provinces.

Table 27
Estimated Financial Services Costs for P4K Program in Comparison to Program Outputs: For Calendar Years 1991 to 1995[a]

Total Cost Per Program Output					
	1991	**1992**	**1993**	**1994**	**1995**
Annual cost (US$)	1,683,723	1,202,411	1,121,263	2,776,900	3,279,289
Cost percent of annual loan volume	176	53	18	23	30
Cost per group credit (US$)	697	238	105	146	213
Cost per new group credit (US$)	813	320	137	197	383
Cost per Program Output Excluding Ministry of Agriculture In-Kind Expenditures					
	1991	**1992**	**1993**	**1994**	**1995**
Annual cash cost (US$)	1,118,709	642,641	576,804	2,036,908	2,503,066
Cost percent of annual loan volume	117	28	9	17	23
Cost per group credit (US$)	463	127	54	107	163
Cost per new group credit (US$)	540	171	70	145	292

a/ Program costs were provided for fiscal years. Costs by calendar year are estimates based on fiscal year data.

The costs detailed above and the fact that BRI earns a below-market rate of return on this program, translates into subsidies for borrowers. To gauge the magnitude of this subsidy, this section provides rough estimates of the program's Subsidy Dependency Index (the percent increase in the interest rate that is required if the program were to be fully self-supporting including paying a market rate of return to liability and equity holders).[48] The program's Subsidy Dependency Index (SDI) follows trends in program costs. In 1991, BRI would have had to increase the program's interest rate by approximately 1,598 percent to pay for the full cost of the program. Over the following 2 years, this figure declined sharply, and stood at 209 percent (125 percent excluding Ministry of Agriculture in-kind contributions) in 1993. Since 1993, the SDI has increased, and stood at 262 percent (218 percent excluding MOA in-kind contributions) in 1995. In 1991, BRI would have had to charge an annual interest rate of approximately 461 percent to fully fund the program and provide market returns to investors. By 1993, this figure had declined to 84 percent. By 1995, this figure had increased to about 98 percent (Table 28).

[48] SDI figures presented here are only rough estimates of actual figures because the author was required to make a number of significant estimations and assumptions. We assume that the total program subsidy is equal to the cost of running the P4K program, that is, that BRI is not subsidizing these loans in other ways. The SDI calculation also requires information on the total interest collected annually on program loans. This information is not available. An estimate for this figure was calculated based on the average interest rate charged on loans, the program's annual average outstanding loan volume, and the program's annual arrears rate. The average interest rate charged on loans is assumed to be 27 percent per year on a declining balance basis including all interest charges, fees, and forced savings requirements.

Further, the SDI is calculated assuming a market return for equity holders. If BRI's actual returns on their loans under this program are below the market level, then the figures presented here underestimate the actual SDI.

See Annex 7 for a description of how the SDI is calculated.

Table 28
Estimate of Subsidy Dependency Index[a] and Required Interest Rates to Cover Program Costs for P4K Program

	Calendar Year				
	1991	1992	1993	1994	1995
Lower bound estimate for SDI with full program costs (percent)	1598	520	209	234	262
Lower bound estimate for SDI with direct costs only (percent)	1087	303	125	184	218
Estimated current average annual interest rate (percent)[b]	27	27	27	27	27
Estimated average interest rate required to fund full program cost (percent)	461	168	84	91	98
Estimated average interest rate required to fund direct program costs (percent)	322	109	61	77	86

a/ The percent increase in the interest rate that is required if the program were to operate without subsidies.
b/ Annual average interest rate calculated on declining balance basis including forced savings requirements.

The program's 262 percent SDI for 1995 is high compared to other programs reviewed in this report. However, the SDI measures the percent increase in the current interest rate required for the program to become self-sustaining. Thus P4K's high SDI is primarily due to the fact that the program's current interest rate of about 27 percent on an annual declining balance basis is extremely low in comparison to other programs'. Thus, this high SDI implies that the program would have to charge an interest rate of about 98 percent to be fully self supporting. This figure is less than one-half that required for PHBK and LKP.

Furthermore, the program was reorganized within the Ministry of Agriculture which led to additional training costs in locations in which the program had been operating for some time. Also, like PHBK, P4K is expanding its geographic coverage. Thus a significant share of its expenditures represent start up costs for new regions. Therefore, it is likely that the program's subsidy will decline in the coming years.

Currently, many P4K groups retain voluntary member savings at the group level and lend these funds out to group members. Groups lending out their own funds typically charge an interest rate of 5 percent "flat" per month. This is equivalent to 154 percent per year on a declining balance basis. The volume of loans made with groups' own funds is very small. However, the high interest rates charged on these loans indicate that if the program were to reduce its current subsidy by charging higher interest rates on loans, it is likely that many current clients could afford the higher costs.

Outreach Scope. Lending volume under the project has expanded very rapidly since fiscal 1991/92 (April 1991 to March 1992).[49] Lending under the program was Rp. 1.9 billion in fiscal 1991/92 (US$939,000) and had risen to Rp. 25.3 billion (US$10.9 million) by fiscal 1995/96. In real terms, P4K volume grew from 104 to 186 percent annually from fiscal 1991/92 through fiscal 1994/95. However, real lending contracted by 6 percent in fiscal 1995/96. Approximately 163,500 households received credit in 1995/96, down sharply from 202,000 in the previous year (Table 29).

Table 29
P4K Program Lending Volume

	Fiscal Year				
	1991/92	**1992/93**	**1993/94**	**1994/95**	**1995/96**
Nominal loan volume (Rp. million)	1,888	4,620	13,209	26,889	25,279
Growth in real loan volume (Percent)	113	145	186	104	-6
Nominal loan volume (US$)	938,793	2,217,945	6,181,011	12,136,816	10,895,930
Number of group loans issued	2,365	4,953	10,504	18,733	15,137
Growth in number of loans issued	102	109	112	78	-19
Estimated number of individuals receiving loans	25,542	53,492	113,443	202,316	163,480

P4K management track savings deposited with BRI and those held at the group level. Savings deposited with BRI include groups' voluntary and required savings. Savings held at the group level are entirely voluntary. Total savings under the program stood at Rp. 6.6 billion (US$2.9 million) at the end of fiscal 1995/96. In real terms, savings have increased very rapidly over the past 4 years. For most of this period, this growth rate has been slightly slower than the rate of growth in P4K lending volume. Savings were equal to about one-third of total outstanding

Table 30
P4K Savings Volume

	Fiscal Year				
	199/92	**1992/93**	**1993/94**	**1994/95**	**1995/96[a]**
Nominal outstanding savings (Rp. million)	394	795	2,169	4,426	6,596
Real growth in savings (percent)	122	85	153	86	35
Nominal outstanding savings (US$)	195,946	381,693	1,014,765	1,997,803	2,843,273
Savings kept within groups percent of total savings	39	31	32	32	32
Savings percent outstanding Bank loans	31	29	28	24	32

a/ Program estimate based on data as of December, 1995.

[49] Some data for the P4K program is presented in calendar years and some in fiscal years. This is due to the fact that P4K program managers track program performance by fiscal years and BRI provided data to the author by calendar years.

loans in fiscal 1995/96. Interestingly, this figure is significantly higher than in the previous year, indicating that robust growth in savings continued even when lending growth slowed. Voluntary savings kept at the group level accounts for about one-third of total savings (Table 30).

Outreach Depth. P4K is the only one of the programs studied that explicitly targets low-income households. The program carefully screens applicants to ensure that all participating households have annual per capita incomes below the monetary equivalent of the price of 320 kilograms of rice (approximately Rp. 320,000 or US$137 in 1996 prices). Program documents claim that only about 15 percent of households nationwide have incomes at this level or below. When adjusted to 1993 Rupiah prices and compared to Indonesia's household expenditure survey, this is equivalent to virtually all program recipients having incomes in the bottom 25 percent of the income distribution for Central Java. It also implies that almost all participants have incomes as low or lower than the poorest one-third of PHBK program beneficiaries.

The program's average loan size is Rp. 155,000 (US$66). This is equivalent to about 7 percent of GDP per capita. Women's groups account for 38 percent of all P4K groups, and women account for about 50 percent of P4K beneficiaries. Approximately 60 percent of clients use loans for off-farm agricultural activities; 20 percent for home industries; and 20 percent for trading.

Productivity. The P4K program is relatively cost-effective as reflected by its unit costs and the reasonable interest rate required to eliminate all subsidies. Further, the subsidy figures detailed above include the start-up costs of expanding the program to new regions of the country and to first-time borrowers. It is likely that once the program has been rolled out nationwide and most target beneficiaries have received their first loan, required subsidy levels will decline significantly.

Nevertheless, it is possible that this program has a hidden cost for rural development. Ministry of Agriculture extension workers function as credit officers in this program. The cost of the time they devote to this activity is included in program costs. However, it is possible that other rural development initiatives suffer because extension agents divert time from other activities, for which they do not receive top-up allowances, to P4K, which provides compensation in excess of their regular salaries.

Furthermore, while the program is reasonably cost effective now, it could significantly improve its cost-per-output ratios if more groups obtained repeat loans. P4K's loan volume (like that of PHBK) is derived primarily from groups receiving their first loan, rather than existing groups receiving additional loans. Costs per unit output could decline significantly if more groups received repeat credits because there are start-up costs to the program, BRI, and individual beneficiaries in organizing groups and underwriting initial loans.

The program estimates that about 21 percent of groups that form never receive a loan. (These groups are referred to as "sleeping"). In addition, many groups become inactive after their first credit (known as "resting."). Only 19 percent of groups have received more than one credit. However the program does not track the number of credits that groups have received as compared to the year in which they received their first loan. Thus it is impossible to calculate what share of groups have been "resting" for years and are unlikely to be revived, and what share

have only recently repaid their first credit and may receive additional funds. This is a very critical issue for program viability and should be explored in more depth via a systematic survey of active and inactive groups. The program also has not yet explored why some groups rest. Thus, it is not clear to what extent groups disband versus are unable to obtain additional credits.

Reasons for Evolution in Program Performance. Program managers attribute P4K's recent increases in arrears and declining volume to the following issues: It is possible that a reassignment of the program within the Ministry of Agriculture contributed to defaults because many borrower groups were accustomed to making repayments to specific agriculture extension workers. When these did not visit the groups for an extended period of time, some groups did not make other arrangements to deliver payments to a BRI outlet. A further hypothesis is that arrears were exacerbated by BRI's policy of canceling the program in districts in which arrears ran higher than 10 percent. Under this policy, many groups with strong repayment records stopped paying when it became apparent that the program was to be discontinued in their area. BRI's policy of canceling credit provision in whole districts also accounts in large part for the contraction in real lending volume in 1995/96.

However, it is also possible that the program's basic structure has contributed to some of its problems. The program uses agriculture extension workers as credit agents. However, extension workers do not generally have a financial or banking background, nor are they under the control or supervision of the bank disbursing the loans. Furthermore, they have no direct incentive to investigate the creditworthiness of borrowing groups, or to encourage these groups to repay their loans in a timely manner. By acting as a go-between for banks and groups, extension agents reduce the transaction costs for both parties. However, they also act as a buffer between the two, inhibiting them from forming direct links. It is possible that few groups receive more than one loan because their primary, and sometimes virtually exclusive, contact in the banking process is the extension agent, and this latter has no incentive to help groups obtain more than one loan. Also, the program's lengthy and bureaucratic loan approval process, which requires that loans applications be considered by the Ministry of Agriculture and BRI, may discourage groups from applying for additional loans. Finally, extension agents provide a number of free services. Thus, groups may be less likely to see the funds they receive as a real obligation to be repaid because their primary contact in the process generally provides free services.

BRI operates this program from its branches rather than through its Unit Desa system. This is highly surprising given that BRI branches are located only in district capitals, and generally make quite large loans. In contrast, Unit Desas are located in sub-district capitals, and make much smaller loans. Thus, Unit Desas are much closer to the credit end-users both geographically and in terms of the types of credits they typically issue. Relocating the program to Unit Desas would facilitate collection efforts and might also increase the proportion of groups receiving more than one credit as it would be much easier for groups to apply for additional credits at these branches.

The program is making some adjustments to improve its performance. BRI will provide small financial incentives for extension workers to expand lending and promote timely repayment in new provinces. Also, BRI has reversed its policy of cutting off all loans in districts with high arrears. In theory, it will now stop giving loans to all the groups serviced by a single extension worker

when the arrears rate for groups working with that worker exceeds 5 percent. However, BRI does not yet track arrears by individual extension workers, and it appears that this new policy has yet to be fully implemented. Also, the program's other significant issues detailed above have not been addressed.

Response to Regulation No.71/1992 Supporting the 1992 Banking Law

P4K is not impacted by the Presidential Regulation supporting the 1992 Banking Law because the program operates through BRI which is a commercial bank.

Competition

P4K faces competition from two programs that provide grants or very low interest loans to P4K's clientele. The Family Planning Board (BKKBN) has a highly subsidized, group-based lending program for poor families called TAKESRA/KUKESRA. This program is funded by the 2 percent of profits that some private firms and individuals are required to channel to poverty reduction. Groups receive a grant or a loan with an effective interest rate that is negative in nominal terms. The pressure to repay these credits is not high. In addition, the *Inpres Desa Tertinggal* (IDT) program provides grants to "disadvantaged" villages for them to use as revolving credit funds. These funds generally carry no or very low interest rates and little pressure to repay funds. P4K organizers feel that these programs compete for the same clients as the P4K program while providing loans with significantly lower interest rates and little repayment pressure.

ANNEX 5: BADAN KREDIT DESA (BKD) PROGRAM

Program Description[50]

The *Badan Kredit Desas* (BKD) is a system of village-owned financial institutions located in West, Central, and East Java, and Yogyakarta. BKD units were first established in 1898 and have existed in their present form since 1952. The BKD concept is based on a Dutch system of village banks. Each BKD unit is owned by an individual village, and operated by three residents of the village. Units generally transact business only one day per week. They operate from a village public building or the home of one of the village leaders. There are 5,345 BKD units, of which 4,806 were active at the end of 1996.

BKDs were established with small capital grants from provincial governments. Their loan capital is derived primarily from this initial grant, retained earnings, and required and voluntary savings. BKD units sometimes also borrow from BRI, other BKD units, local governments, and other parties. In practice however, most BKDs keep large deposits with BRI branches or Unit Desa and have little need of loans.

BKD earnings are used for commissions to their staffs and fees to an accountant and BRI. The profits remaining after these deductions stay with the unit in the form of retained earnings.

Supervision. BRI managers at regional and head offices define the business of BKDs. BKD records are prepared weekly by an accountant hired by the unit. BKDs are supervised by BRI staff or contract workers. BKDs generally receive at least one supervision visit per month. Supervisors review the units' bookkeeping, cash handling, and portfolio quality. They arrange for excess BKD funds to be deposited with BRI branches, organize BRI loans to BKDs, and facilitate BKD units' lending to each other. Supervisors can dismiss unit staff. BRI staff who act as supervisors are paid Rp. 9.6 million (US$4,110) annually for their service. This is equivalent to about 4.3 times annual per capital GDP. Supervisors hired as contractors are paid less but are part of a BRI pension plan. All BKDs within a district share responsibility for payment of the district's supervision fee. The fee is allocated across BKDs based on the volume of their lending activities. Thus, BKDs with a relatively high annual loan volume pay a larger share of the supervision cost than BKDs with a low volume.

Loan Products

Loan of 10 to 12 weeks account for about 65 percent of BKDs' loan volume. These loans have an interest rate and payment terms almost identical to that of the LKPs in NTB. The loan is repaid in 10 to 12 equal installments. The first installment represents the interest due on the loan, the next a forced savings payment, and the final 8 to 10 are repayment of capital. Seasonal/agricultural loans account for about 20 percent of BKDs' loan volume, and 35 day loans account for 15 percent. Loans of 20 to 22 weeks account for about 0.2 percent of loan volume.

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[50] The author did not collect detailed data for the BKD program. The following annex contains some general information.

In theory borrowers can reclaim their forced savings after they have repaid their loan. In practice, borrowers' ability to withdraw their required savings varies by BKD office. Many BKDs allow withdrawals only for religious holidays or do not allow withdrawals at all, such that the forced savings becomes a fee.

The interest rate for the BKD 12 week loan product is equal to 7.2 percent per month or 131 percent per year on a declining balance basis assuming that the forced savings is returned without interest after the loan is repaid. The monthly interest rate is 9.5 percent and the yearly rate 347 percent if the forced savings payment is never returned.

In 1995, loans generally ranged in size from a minimum of Rp. 25,000 (US$11) to a maximum of Rp. 600,000 (US$257). However, seasonal credits could reach Rp. 1 million (US$428).

Savings Products

BKDs have accepted voluntary savings deposits since 1991. These accounts earn interest at a rate of 9 percent per year. This rate is about equal to inflation and the rates paid by BKKs, LKPs, and BRI on small deposits. Rural banks (BPRs) often pay rates almost twice as high. Forced savings do not earn interest.

Staffing

Each unit is staffed on a part-time basis by three village inhabitants. Staff is appointed by the village chief but must be approved by BRI supervisors. Staff can by dismissed by the village chief acting on advise from the supervisors. Staff compensation consists of a commission equal to 2.5 percent of the principal payments collected which is divided between the staff members. Staff receive no other compensation.

Underwriting and Loan Servicing

For each unit, loans are underwritten and serviced by the three BKD staff members. Because the staff members live in the villages they serve, they generally have good information about individuals' creditworthiness. Staff members have an incentive to perform these functions prudently because their compensation is based on collections.

Program Performance

The author did not collect detailed information on BKD program performance. The following represents the available data concerning program sustainability and outreach.

Sustainability. Data on default and arrears are problematic because BKDs only write off loans in default if the borrower moves, or if the loan is more than 5 years overdue. Table 31 estimates default and arrears rates for the program by simulating the program writing off all loans in default each year.[51] Using this approach, annual default rates ranged from 2 percent to 6 percent in the mid-1990s. Loans in default accounted for approximately 4.9 percent of loans in 1996, up from 2.6 percent in 1995. The loan volume in arrears was equal to 16 to 23 percent of outstanding credits during the mid-1990s. The volume of loans in arrears in 1996 was 21 percent of outstanding loans, up from 16 percent in 1994.

Table 31
Incremental Annual Default and Arrears Rates for BKD

	1992	1993	1994	1995	1996
Loan volume in default percent of outstanding loans	6.0	4.4	2.0	2.6	4.9
Loan volume in arrears percent of outstanding loans	22.9	17.8	15.9	17.6	21.2

BKDs do not adequately provision for bad debt. To partially adjust for the reporting inaccuracies that this creates, BRI reported the BKD system's profitability if the units wrote off 100 percent of their loans in arrears past the final due date each year. If calculated in this way, the system had a return on assets of 8.7 percent and a return on equity of 11.0 percent in 1996. These rates translate into a real return on assets of 0.7 percent and a real return on equity of 2.8 percent. Nominal returns have declined slightly over the last three years, but real returns rebounded slightly in 1996 (Table 32). The author did not collect the data required to estimate the BKDs' unsubsidized profitability. However, the major inaccuracy in BKD reporting is the fact that the units do not adequately provision for bad debt. Thus, it is likely that the figures presented above which partially compensate for this do not greatly over-state the units' performance.

Table 32
Adjusted BKD Profitability as Reported by BRI[a]

Profitability Measure	1993	1994	1995	1996
ROA (percent)	11.4	9.2	9.2	8.7
Real ROA (percent)	1.6	0.6	0.2	0.7
ROE (percent)	14.4	11.7	11.7	11.0
Real ROE (percent)	4.3	2.9	2.0	2.8

a/ These figures simulate the BKD system's profitability if the units wrote off 100 percent of their loans in arrears past the final due date each year.

Outreach Scope. Active BKDs are located in 4,806 villages on Java. In Eastern Java and the island of Madura, BKD units are located in about 20 percent of all villages (Christian, 1995).

[51] Loans in default are assumed to be loans that are in arrears by more than 6 months past the loan's final due date.

Information on total annual lending was not available. The data in Table 33 above are estimates of annual lending derived by multiplying lending during the month of December of each year by 12. Using this rough approximation, lending grew from Rp. 232 million (US$111 million) in 1993 to Rp. 305 million (US$131 million) in 1996. The program issued approximately 1,760,000 loans in 1996, up slightly from 1,713,000 in 1993. The real volume of lending grew in each year except 1995.

Table 33
BKD Estimated Annual Lending[a]

	1993	1994	1995	1996
Nominal lending volume (Rp. million)	232,312	256,847	258,589	305,330
Growth in real lending volume (percent)	8	2	-8	9
Nominal lending volume (US$)	110,624,920	117,819,793	113,416,153	130,698,739
Number of loans issued	1,713,336	1,639,104	1,606,884	1,757,028
Growth in number of loans issued (percent)	3	-4	-2	9

a/ Estimates are derived by multiplying the lending volume in December of each year by 12.

Total savings under the program stood at Rp. 23 billion (US$9.8 million) at the end of 1996. In real terms, savings have grown slowly but consistently since 1993. The volume of outstanding savings was equal to about 26 percent of total outstanding loans net of likely default in 1996. That figure has been constant over the last four years. BKD units have offered voluntary savings products since 1991. Since 1993, voluntary savings have been equal to about 5 percent of outstanding loans net

Table 34
BKD Required and Voluntary Savings

	1993	1994	1995	1996
Total nominal savings (Rp. million)	16,053	18,239	20,070	22,827
Growth in real savings (percent)	4	5	1	5
Total nominal savings (US$)	7,644,063	8,366,488	8,802,677	9,771,259
Total savings percent of total outstanding loans	25.1	25.2	24.6	25.7
Voluntary savings percent of net loans[a]	5.4	5.3	4.8	4.9
Voluntary savings real growth rate (percent)	3.2	1.6	-6.2	-0.5

a/ The volume of voluntary savings is compared to that of outstanding loans net of required savings because in practice, savings required to obtain a loan are equivalent to borrowers receiving a smaller loan. Thus, comparing voluntary savings to loans net of required savings allows an analysis of the importance of voluntary savings in funding loans.

of likely defaults and net of required savings.[52] The voluntary of voluntary savings declined in real terms in 1995 and 1996 (Table 34).

Outreach Depth. BKDs had an average loan size of Rp. 173,776 (US$74) in 1996. This is equivalent to about 6.5 percent of GDP-per-capita.

Productivity. BKDs have extremely low fixed costs. Units operate out of existing village facilities, and staff are paid entirely on commission. Even the cost of BRI supervision is tied to the units' annual loan volume. This cost structure makes BKDs uniquely suitable for delivering financial services in very remote, low-density areas. However, because their loan portfolio is entirely concentrated in a single village, units are very vulnerable to systemic credit risk. Furthermore, most units lack dynamism as discussed below.

Reasons for Evolution in Program Performance. Most BKD units lack dynamism; and over time, many slowly decapitalized. While there were initially 5,345 units; by 1992, only about 3,000 active units remained. BRI recapitalized an additional 1,000 units in 1992. Units are managed on a part-time basis by people with other business activities. In practice, most units lend to the same small group of customers over time, and often make little effort to expand the volume of their business or broaden their customer base. This lack of dynamism is reflected in the system's very low loan to assets ratio. Loans accounted for 48 to 49 percent of assets from 1993 though 1996. This compares to the South Kalimantan BKK system in which loans account for 84 percent of assets. BKD units have very few fixed assets and no investments. Thus, during the mid 1990s, 36 to 39 percent of their assets were held as demand deposits in BRI branches and Unit Desa.

In the early 1990s, BRI undertook an information and promotion campaign to encourage fund managers to expand their customer base. However, this initiative met with little success. Further, BRI's enthusiasm for the project was diminished when the 1992 Banking Law prohibited the expansion of the BKD system and the BKDs were instructed not to compete with KUD savings and loan initiatives.

Response to Regulation No.71/1992 Supporting the 1992 Banking Law

Most BKD units are too small to qualify to become BPRs according to the 1992 Banking Regulation. However, the regulation makes an exception for institutions already in existence prior to 1992 and possessing a license from the Ministry of Finance. BKDs fall into this classification. BI is currently determining how it will deal with BKD units that are too small to become BPRs. It appears likely that these units will be allowed to continue to operate but will no longer be able to take deposits from people outside the village in which they are located. Further, the Regulation prevents the creation of new BKDs.

[52] The volume of voluntary savings is compared to that of outstanding loans net of required savings because in practice, savings required to obtain a loan are equivalent to borrowers receiving a smaller loan. Thus, comparing voluntary savings to loans net of required savings allows an analysis of the importance of voluntary savings in funding loans.

To allow for growth in the number of BKD type institutions, the government has created 975 similar institutions spread across 24 of Indonesia's 27 provinces since 1994. These new institutions are called *Tempat Pelayanan Simpan Pinjam* (TPSP). They are almost identical to existing BKDs in their structure and function except that they come under the umbrella of the *Koperasi Unit Desa* (KUD) village cooperative system. These institutions do not violate the Regulation because financial institutions under the cooperative system are exempt from the minimum capital requirements that threaten the existence of other small financial institutions.

Table 35
Approximate Costs to Establish New TPSP Units

Input	Cost (US$)	Percent of Total Costs
Total	7,958	100
Start-up capital endowment grant (retained by TPSP unit)	3,448	43
Start-up grant for fixed assets (retained by TPSP unit)	216	3
Technical support, project monitoring and materials printing (retained by KUD)	2,968	37
Training for staff and KUD and BRI supervisors (paid to BRI)	1,326	17

These new institutions have been funded by grants from the National Development Planning Agency (BAPPENAS) to KUD. As of 1996, BAPPENAS had provided a total of approximately Rp. 18 billion (US$7.9 million) to the KUD system to establish 975 TPSP units. Thus, it costs approximately Rp. 18.5 million (US$8,000) to establish each new TPSP. This grant is used as follow: Each TPSP unit receives a one-time sum of Rp. 8 million (US$3,500) as seed loan capital and an additional one-time grant of Rp. 500,000 (US$220) to purchase equipment and supplies. BRI receives approximately Rp. 3.1 million (US$1,300) per unit to train three unit staff members and the KUD and BRI supervisors. KUDs receive almost Rp. 6.9 million (US$3,000) to provide technical support and project monitoring, and to print materials. Thus, new TPSP units retain 46 percent of the funds spent to establish them, the KUD system keeps 37 percent of these funds, and BRI, 17 percent (Table 35).

In contrast to BKDs, TPSPs are supervised by BRI and by the KUD system. Unlike BRI's BKD supervisors, BRI's TPSP supervisors are paid entirely on commission. They receive 15 percent of the interest collected by the TPSP branches they supervise. Each supervisor is responsible for 18 TPSPs. TPSPs are also overseen by a KUD technical administrator who receives a salary of Rp. 120,000 (US$53) per month. KUD technical administrators each oversee 6 TPSPs.

Thus, the 1992 Presidential Regulation has forced new BKD-type institutions to fall under the auspices of the KUD system. This has resulted in a start up cost of about US$3,000 per unit to cover KUD expenses and an ongoing cost of about US$53 per unit per month for KUD supervision. It is not yet clear whether these costs will be justified in terms of improved unit performance. However, the KUD system has a very inauspicious history of managing financial institutions, and appears to be pressuring the units to make loans at subsidized rates.

Competition

BKDs' relatively low maximum loan size and high interest rates ensure that they do not compete with BRI's Unit Desa branches. BKDs may have difficulty competing with BKKs and other provincial-owned financial institutions in villages served by both types of facilities, because BKKs also provide small, non-collateralized loans and village-level service. Further, they charge a substantially lower interest rate than do BKDs.

ANNEX 6: CLASSIFICATION OF LOANS, LOAN LOSS PROVISIONING, AND WRITE-OFFS

For the five programs reviewed, classification of outstanding loans by age of arrears, provisioning for bad debt, and write-off practices do not meet best practice standards, and are frequently ad hoc and inconsistent across time. Only three of the five programs reviewed classify outstanding loans by the age of past due payments. Further, even for these three, aging categories are too broad to permit a careful analysis of portfolio quality. The programs use methods to establish loan loss provisions that vary over time, and are frequently determined by the program's profitability rather than the quality of its portfolio. The BKK program provisions for bad debt annually and then adds these sums back into equity rather than maintaining a reserve for bad debt. Some of the programs do not write off loans in default at all. Others do so only after a number of years or if the borrower leaves the area.

These approaches make it difficult for program managers to: identify in a timely manner trends in loan portfolio performance; assess measures taken to improve repayment rates; and gauge program profitability. The programs should adopt guidelines more in keeping with internationally-accepted best practice for microfinance institutions.

Microfinance management guidelines recommend that programs classify loans by their age of past due payments, and provision accordingly. The most precise way to determine appropriate provisioning standards is to examine loans categorized by age of late payment at a point in the past such that all loans in that portfolio will currently either be repaid or in default. The analyst should then assess what percent of loans that were current at that time subsequently defaulted, what percent of loans 1-30 days late subsequently defaulted, what percent of loans 31-60 days late subsequently defaulted, etc. The percent of loans in each category that later defaulted can then be used to determine appropriate provisioning levels. For example, if approximately 20 percent of loans that were 31-60 days late in payment subsequently defaulted, then the program should maintain provisions for bad debt equal to 20 percent of the volume of loans that currently have payments 31-60 days late.

To determine the most appropriate provisioning levels, this analysis should be carried out separately for each of the program's loan products if these products vary in their likelihood of default over time. For example, a loan that has a weekly repayment requirement and a one month term, is not backed by collateral, and is 3 months in arrears may be much more likely to default than a loan that has an 18 month term and a quarterly repayment requirement, is backed by collateral, and is also 3 months in arrears. Thus, ideally the above analysis should be carried out for each of these loan products, and different provisioning guidelines applied to each.

The analyst also should establish that the market conditions prevailing at the point in time that the analysis is based on have not changed substantially. For example, the analysis might be based on the ultimate repayment performance of loans in the portfolio three years ago, during a period of economic prosperity. If the region is currently suffering economic hardship, then the repayment

performance of loans in the portfolio during this previous period is unlikely to accurately predict repayment performance of loans currently outstanding.

If data limitations prevent an analysis of previous repayment performance for a portfolio of loans categorized by age of arrears, recordkeeping procedures should be established to allow for this evaluation in the future. Once these procedures are in place, the microfinance provider will then have to wait one year or more before there will be sufficient data to perform this exercise. In the meantime, the microfinance institution should provision according to generally-accepted ranges for provisioning based on the aging of loans at risk. Three microfinance management guidelines[53] Recommend that institutions categorize loans and provision for bad debt as detailed in Table 36.

Table 36:
Recommended Portfolio Aging and Loan Loss Provisioning for Microcredit Programs

Loans With Payments	Loan Loss Provisioning (Percent of Loan Volume)
Current	0-3
1-30 days late	0-10
31-60 days late	10-25
61-90 days late	50
91-120 days late	50-100
121-180 days late	50-100
181-360 days late	100
More than 360 days late	100

Currently the Ministry of Finance require that institutions maintain loan loss reserves equal to no more than 3 percent of outstanding loans. This restriction should be lifted for institutions judged to follow appropriate loan provisioning guidelines.

Microfinance management guidelines Recommend that programs write off loans when the probability of the loan being recovered, or continuing to generate income, is so low that it is misleading to continue to show the loan as part of the institution's financial situation. Also, if loans are never written off, it becomes increasingly difficult for program managers to assess current repayment rates because the results of previous periods of high default are intermingled with more recent portfolio performance. Finally, if loans are effectively in default but have not been adequately provisioned for and they are not written off, the program will not accurately report its profitability. The Inter-American Development Bank (1994) maintains that microfinance programs with loans of relatively short maturity should write off all loans that are more than 90 days late in repayment. Programs should bear in mind that writing off a loan does not remove the borrowers' obligation to repay it. The program should continue to pursue collection of loans it has written off until the cost of doing so outweighs the monetary benefit of likely repayment **and** the demonstration benefit of discouraging other borrowers from default.

[53] SEEP (1995); Inter-American Development Bank (1994); and William Tucker, presentation at Microfinance Seminar for World Bank Staff, April 23-24, 1996.

ANNEX 7: SUBSIDY DEPENDENCE INDEX FOR RURAL FINANCE INSTITUTIONS[54]

Two main problems face the analyst who must rely on conventional accounting data to measure the financial performance of rural finance institutions (RFIs): the difference between the expense and income (including reimbursement of specific expenses by state or donor) captured and reflected in the RFI income statement and those expenses and incomes not recorded in the RFI income statement, and the lack of a design in conventional accounting practices to reflect and appropriately report on all types of subsidies received by an RFI.

Conventional accounting practice measures the cost of funds priced at their actual cost. The opportunity cost of an RFI's borrowed funds - that is, the cost the RFI would have to pay for its funds if access to concessional funds were eliminated - is not taken into account. The SDI calculation assumes that the volume of the RFI's outstanding loan portfolio remains unchanged. Hence, the change is caused by substituting concessional borrowed funds with voluntary savings, obtained at a market deposit interest rate. Thus, if the central bank loans to an RFI at 2 percent, conventional accounting practices list the cost of the loan at 2 percent p.a. However, if the cost of alternative non-concessional funds is 12 percent p.a., then the SDI considers the 10 percent difference in interest rates on those funds and identifies this subsidy received by the RFI. The rationale is that if the subsidized RFI paid only 2 percent p.a. on central bank rediscounting facilities instead of the prevailing market deposit rate of 12 percent p.a., the accounting profit and the financial ratios measuring the RFI's profitability would not convey that such ratios were only obtained due to the significant subsidy embodied in the cheap central bank rediscounting facilities. Providing an RFI with concessional funds is the most common method of subsidization, yet calculating the value of the subsidy implicit in the RFI's concessionally borrowed funds requires information not included in the RFI's financial statements. The same is true for the RFI's equity.

In contrast to the profit maximizer, who does not differentiate between profit that is subsidy-dependent as long as continued subsidization is ensured and profit that is fully subsidy-independent, subsidy dependence is crucial to RFI's performance assessment. The social cost of RFI operations, of which subsidies constitute a significant share, is essential in determining the social justification for their existence and continued operations, because rural RFIs are often public or quasi-public institutions. To illustrate the futility of the current financial reporting system, one may ask, for example, what is the meaning of an RFI's return on equity of 20 percent when 50 percent of the RFI's financial obligations constitute concessional borrowed funds from the central bank (rediscounting facilities), carrying an interest rate significantly below market deposit interest rates, and one-third of its payroll cost, 80 percent of its loan losses and all training expenses are assumed by the government.

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[54] The Subsidy Dependency Index was introduced in Yaron. 1992b. This annex is excerpted from: M. Gurand, G. Pederson, J. Yaron. 1994. *Outreach and Sustainability of Six Rural Finance Institutions in Sub-Saharan Africa*. World Bank Discussion Paper No. 248. Washington, DC: Agriculture and Natural Resources Department, World Bank, pp. 72 - 75.

Furthermore, breaking away from applying financial prices of inputs and outputs and instead using shadow prices reflecting the social cost of investing in the real goods sectors have become common practices in assessing and measuring the social desirability of investments. Applying economic shadow prices permits calculation of the economic rate of return (ERR), which often diverges from the financial rate of return (FRR). Application of the SDI calculation seeks to achieve a similar goal: to measure more accurately the social cost involved in an RFI's continued operations. There is, however, a difference between the ERR's and the SDI's approaches: the SDI does not claim to fully assess and measure the social benefits of resources allocation through an RFI to the real goods sectors. The SDI, however, better estimates the social cost of the subsidy involved by applying approximate market interest rates to the financial resources used by the RFI.

The objective of the SDI methodology is to provide a comprehensive method of assessing and measuring the overall financial costs involved in operating an RFI and quantifying its subsidy dependence. The SDI methodology suggests moving away from over-reliance on the financial profitability ratios of conventional accounting procedures in the financial analysis of RFIs. The SDI aims at providing a public interest analysis of RFI financial performance and subsidy dependence. This type of analysis involves taking full account of the overall social costs entailed in operating an RFI, including the full value of all subsidies received by the institution. The SDI makes explicit the subsidy needed to keep the institution afloat, much of which is not reflected in conventional accounting reporting. The proposed SDI is a user-friendly device that is simple to calculate because it does not require collecting detailed information on an RFI's operational costs. The SDI is instrumental in:

1. placing the total amount of subsidies received by an RFI in the context of its activity level, represented by interest earned on its loan portfolio (similar to calculations of effective protection domestic resource cost or job creation cost);

2. tracking an RFI's subsidy dependence over time; and

3. comparing the subsidy dependence of RFIs providing similar services to a similar clientele.

The dialogue with borrowing countries can be significantly enriched by using the SDI as a routine instrument measuring an RFI's performance during appraisal, supervision and completion of projects. As with any other financial measurement tool, however, the SDI is only as accurate as the data used to compute it.

The SDI assesses and quantifies subsidy dependence. Its assessment and calculation require the application of certain procedures as well as judgment, and consistency from period to period is more important than the absolute accuracy of the figures included in the SDI computation. The SDI is a ratio that measures the percentage increase in the average on-lending interest rate required to compensate an RFI for the elimination of subsidies in a given year while keeping its return on equity equal to the approximate non-concessional borrowing cost. The index assumes, for simplicity, that an increase in the on-lending interest rate is the only change made to compensate for loss of subsidy. Although removal of subsidies received by an RFI is not always

politically feasible or desirable, measurement of any subsidy is always warranted economically and politically.

Calculating the SDI involves aggregating all the subsidies received by an RFI. The total amount of the subsidy is then measured against the RFI's interest income because lending is the prime activity of a supply-led RFI. Measuring an RFI's annual subsidies as a percentage of its interest income yields the percentage by which interest income would have to increase to replace the subsidies and provides data on the percentage points by which the RFI's on-lending interest rate would have to increase to eliminate subsidies.

Computation of the Subsidy Dependence Index (SDI). The amount of the annual subsidy received by an RFI is defined as:

$$S = A (m - c) + [(E * m) - p] + K$$

where:

S = Annual subsidy received by the RFI;
A = RFI concessional borrowed funds outstanding (annual average);
m = Interest rate the RFI would be assumed to pay for borrowed funds if access to borrowed concessional funds were eliminated;
c = Weighted average annual concessional rate of interest actually paid by the RFI on its average annual concessional borrowed funds outstanding;
E = Average annual equity;
P = Reported annual profit (before tax) (adjusted, when necessary, for loan loss provisions, inflation, etc.);
K = The sum of all other annual subsidies received by the RFI (such as partial or complete coverage of the RFI's operational costs by the state).

The financial ratio that is suggested as an SDI is:

$$SDI = \frac{S}{LP * i}$$

where:

SDI = Index of subsidy dependence of RFI;
S = Annual subsidy received by the RFI (see above);
LP = Average annual outstanding loan portfolio of the RFI;
i = Weighted average on-lending interest rate received on the loan portfolio of the RFI.

The SDI by itself does not clarify how the subsidy was used and whether most benefits were accrued to clients or were consumed by an inefficient bureaucracy. The latter question, though

important, requires far more detailed data and even then is often subject to interpretation. The advantage of the SDI is its simplicity, and as such it focuses exclusively on the intake subsidy, i.e., the value of subsidy received by the RFI. The SDI should be seen in some instances as a lower bound because full financing of RFI activities is likely to be difficult at current market borrowing rates (m) if an RFI's financial performance is dismal. However, calculating this lower bound is vital for ascertaining either the RFI's progress toward self-sustainability or the social desirability of its continued subsidy dependence.

An SDI of zero means that an RFI achieved full self-sustainability. An SDI of 100 percent indicates that a doubling of the average on-lending interest rate is required if subsidies are to be eliminated. Similarly, an SDI of 200 percent indicates that a threefold increase in the on-lending interest rate is required to compensate for the subsidy elimination. A negative SDI indicates that an RFI not only fully achieved self-sustainability, but that its annual profits, minus its capital (equity) charged at the approximate market interest rate, exceeded the total annual value of subsidies, if subsidies were received by the RFI. A negative SDI also implies that the RFI could have lowered its average on-lending interest rate while simultaneously eliminating any subsidies received in the same year.

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